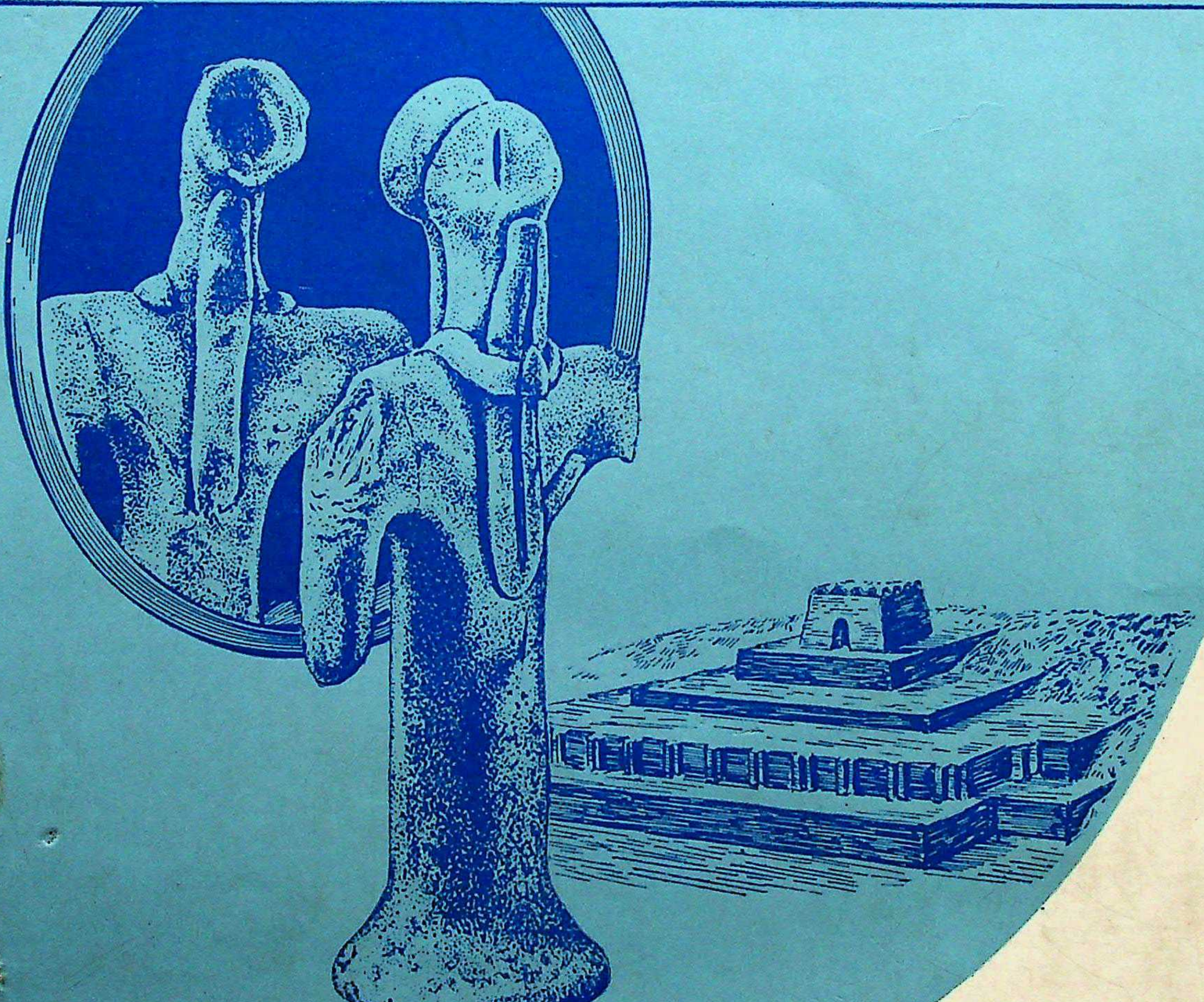
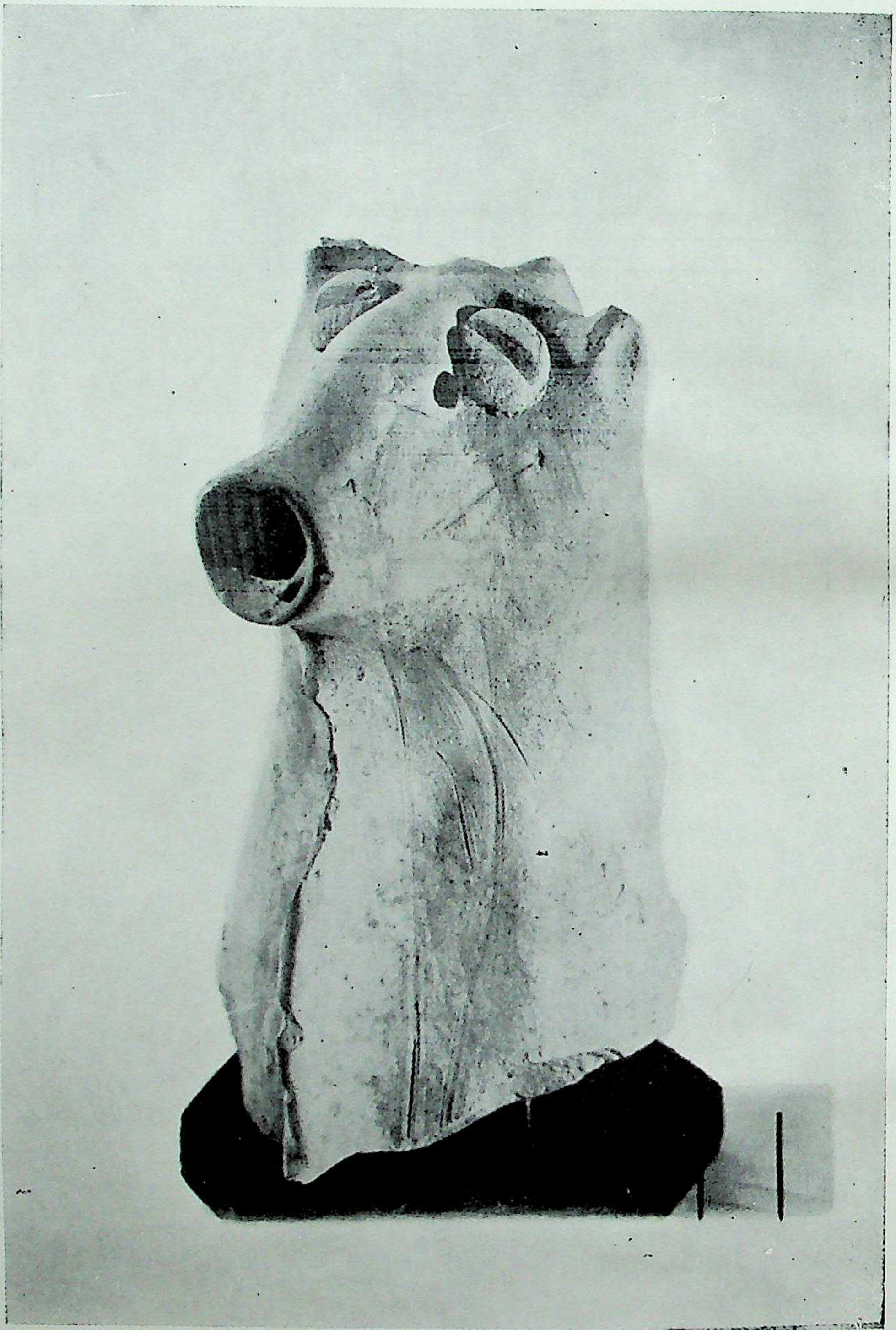
# ARCHAEOLOGY OF SOVIET CENTRAL ASIA, AND THE INDIAN BORDERLANDS



S.P. Gupta

Vol. 2

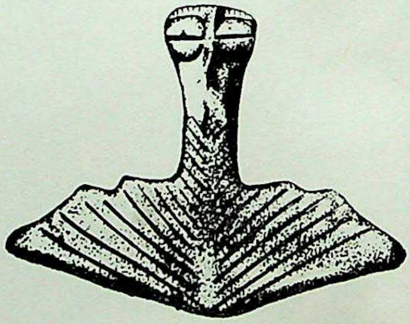
PROTOHISTORY



*Terracotta figurine; Namazga* V

# ARCHAEOLOGY OF SOVIET CENTRAL ASIA, AND THE INDIAN BORDERLANDS

# Archaeology of
# and The Indian



B. R. PUBLISHING

# Soviet Central Asia, Borderlands

Vol. II

---

S. P. GUPTA

---

CORPORATION, DELHI.

*First Published, 1979*
© Author

*Graphics*
M.S. Mani
*and*
S.P. Chatterji, Lalit Jain
Jassu Ram, Rajini Mathur

4961

State Museum Library Lucknow

*Cover design and Plates lay-out*
Lalit Jain

*Distributors*
D.K. Publishers' Distributors,
1, Ansari Road, New Delhi-110002

*Publishers*
B.R. Publishing Corporation
461, Vivekanand Nagar, Delhi-110052

*Printers*
Rajkamal Electric Press,
Old Subzi Mandi, Delhi-110007

*FOR MY MOTHER, SARASWATI DEVI*

# CONTENTS

RADIOCARBON DATES ix-x

RUSSIAN TERMS IN ENGLISH xi-xii

PREFACE xiii-xv

INTRODUCTION xvii-xxiii

1. THE NEOLITHIC 1-52
Introduction 1-4; Djeitun Culture 4-14; Neolithic Cultures beyond Turkmenia: Introduction 14-16; Akcha Darya Delta 16; Sarykamysh Delta 16-17; Uzboi Basin 17; Caspian Neolithic 17-19; Kelteminar Culture 19-21; Gissar Culture 21-26; Central Asia and the Indian Borderlands: Ror Culture 26-29; The Problem of Microlithic in Neolithic assemblage 29; Aceramic Neolithic 30-33; Ceramic Neolithic 33-45; Discussion 45-52.

2. THE CHALCOLITHIC 53-132
Introduction 52-56; Periodization 56-58; Pre-Anau Culture 59-64; Anau Culture 64-65; Namazga I Culture 65-73; Namazga I sites in Geoksyur Oasis 73-76; Namazga II Culture 77-82; Namazga II sites in Geoksyur Oasis 82-87; Contacts with sites beyond Geoksyur Oasis 87-88; South Turkmenia and Baluchistan 88-90; Namazga III Culture 90-96; Namazga III sites in Geoksyur Oasis 96-110; Sites on Indian Borderlands; Mundigak and Shahr-i Sokhta 110-122; South Turkmenia and Indian Borderlands—Contacts 122-132.

3. THE BRONZE AGE 133-220
Introduction 133-136; Namazga IV (lower levels; Early Bronze Age culture) 136-150; Central Asia and Indian Borderlands 150-151; Namazga IV (Upper Levels) and Namazga V (Middle or Mature Bronze Age culture) 151-164; South Turkmenia and

Indian Borderlands 164-170; Bronze Age cultures beyond South Turkmenia: General 170-171; South-East Complex 171; North-East Complex: Zaman Baba Culture 171-172; Fergana Valley Complex 172-175.

Namazga VI (Late Bronze Age) General 175-176; Submontane sites 176-180; Murgab Delta sites 180-184; Steppe Bronze Age Complex: General 184-185; 'Timber Grave' Complex: General 185; Eastern Amu Darya Delta Group: Kokcha-3 Cemetery 185-188; Eastern Andronovo Complex: General 188; Tashkent Oasis Group 188-189; Kirgizia Mountainous Group 189; Fergana-Kairak Kum Group 189-191; Lower Zaravshan Group 191; South-Western Tadjik Group—-Bishkent Culture, Tulkhar Cemetery 191-194; North-Western Afghan Group—Dashli-Sapalli Culture 194-204; New Discoveries 204-206; Swat Culture and Gandhara Graves 206-219.

4. THE EARLY IRON AGE 220-248

Introduction 221-224; Dahistan Group 223-226; Kopet Dag Group 226-227; Murgab Delta Group 227-229; Evaluation of the Early Iron Age of South Turkmenia 229-230; The Akcha Basin in Khorezm—Amirabad Culture, Tagisken Cemetery 231-232; Fergana Valley—Chust Culture 232-240; Iron Age Gandhara Graves, Plain Grey Ware, Painted Grey Ware and the Vedic Aryans—A Review of the Problem of Correlation 240-248.

5. THE POLEMICS 249-285

General 233-254: Views of Masson and Sarianidi, Tosi, Lamberg-Karlovsky 254-258; Dales 258-260; Tosi and Shahr-i Shokhta 261; Our Review 263-264; Our Review of the Framework of Culture-Change stages on the Indian Borderlands as proposed by Dales: General 263-264; Phase A, General: Area of Refuse or Nuclear Zone?—Beginning of Neolithic 264-265; Northern Afghanistan (Ak Kupruk) 266-267: Northern Baluchistan (Mehrgarh) 267-270; South Asia *vis-a-vis* West Asia and Central Asia 270-271; Southern Afghanistan (Mundigak) 271-272; Central India: Ganga Basin (Koldihwa-Mehgarha Culture) 272; Phase B 273; Phase C 273; Phase D 273-274; Phase E 274-282; Phase F 282-284; Phase G 284-285.

6. EPILOGUE 286-296

APPENDICES 297-318

ABBREVIATIONS AND LIST OF JOURNALS 319-320

BIBLIOGRAPHY 321-330

INDEX 331-342

LIST OF PLATES 343-344

PLATES

# *Some Important Radiocarbon Dates*

**Machai Cave**
South Tadjikistan, Surkhan Darya, (Mesolithic-Neolithic)
LE—982 : 5600±100 B.C. (7550±100)

**Djebel Neolithic**
South Turkmenia
5570±30 B.C. (7520±30)
LE—1 : 4080±140 B.C. (6030±30. It is about 1000 yrs. later than Djeitun)

**Chagalli-Depe**
South Turkmenia, (Djeitun Neolithic Culture)
(i) 5036±110 B.C. (6986±110)
(ii) 7000±110 B.C. (8950±110)

**Chagalli-Depe**
South Turkmenia, (Later layers of Neolithic Culture at the site)
LN—592 : 5050± 100 B.C. (7500±100)

**Toglak-Depe**
South Turkmenia, (Earlier half of the Intermediate Phase of Djeitun Culture)
5535 h.l. (GDR)
Bln-718 : 4940±100 B.C. (6890±100)
Bln-719 : 5370±100 B.C. (7320±100)

**Geoksyur I**
South Turkmenia (Chalcolithic Culture) 5570±30 h.l.
(1) LE—547 : 2490±180 B.C. (4440±180)
(2) LE—257 : 1800± 90 B.C. (3750±90)
(3) Bln—720 : 2660±100 B.C. (4610±100)

**Ulug-Depe**
South Turkmenia (Bronze Age, Namazga V)
5570±30 h.l.
(1) Bln—714 : 2146±100 B.C. (4096±100)
(2) Bln—715 : 2190±100 B.C. (4143=100)
(3) Bln—717 : 2070±100 B.C. (4025±100)
(4) LE—980 : 1380±95 B.C. (3330±95)

**Kara-Depe**
South Turkmenia : Chalcolithic Culture; (Namazga III)
2750±220 B.C. (4700±220)

**Altin-Depe**
South Turkmenia, (Namazga V Culture)
Bln-716 : 2170±100 B.C. (4120±100)

Bln—716 : 2070±100 B.C.
(4025±100)
L—664 : 2120±50 B.C.
(4070±50)

**Namazga-Depe**
Chalcolithic Culture (Namazga II)
LE—665 : 1030±60 B.C. (2980±60)

**Dashly-Depe**
North Afghanistan (Late Bronze Age, transition between Namazga V and VI)
LE—976 : 1250±45 B.C. (3200±45)
LE—975 : 1570±45 B.C. (3520±45)

**Dashly-Tepe**
North Afghanistan (Late Bronze Age, Namazga VI type)
LE—977 : 1390±40 B.C. (3340 ±40)

**Dashly-Tepe 3**
North Afghanistan (Late Bronze Age, Namazga VI type)
LE—978 : 1490±50 B.C. (3440 ±50)

**Sapalli Tepe**
Surkhan Darya, south Uzbekistan, (Late Bronze Age, Dashly 3 type)
LE—916 : 1690±90 B.C. (3640±90
LE—1078 : 1500±50 B.C. (3450±50)

**Kuchuk Tepe**
South Tadjikistan (Yaz I, Early Iron Age Culture)
LE—733 : 900±60 B.C. (2853±60)

**Cementere "Tigrovai Valka"**
South Tadjikistan (Late Bronze Age)
LE—715 : 1380±60 B.C. (3300±60)

**Yelovka II Grave**
Tomsk (Late Bronze Age)
LE—940 : 1110 B.C (3060±65)
LE—939 : 1200 B.C. (3150±55)

**Tuktubayevo Cemetery**
(Chelyabinao Late Bronze Age,South Urals)
LE—922 : 1230±70 B.C. (3180±70)
LE—921 : 1070±60 B.C. (3020± 60)

**Lipovaya Kur'ya**
(Chely abinsk Late Bronze Age, south Urals)
LE—1016 : 1100±60 B.C. (3150±60)

**Alakul Cemetery**
Late Bronze Age
LE—924 : 1410±50 B.C. (3360±50)

**Amangal'dy 1 Cemetery,**
North Kazkhstan
(Andronovo Late Bronze Age Culture)
LE—990 : 1780±80 B.C. (3730±80)

**Novo-Nikol'skoye 1**
North Kazakhstan
(Andronovo Late Bronze Age Culture)
LE—989 : 1210±120 B.C. (3160±120)

**Yaz Depe**
Murgab Oasis
8th-4th Century B.C.

**Loebanr I**
North Pakistan
(Late Bronze Age—Early Iron Age)
(1) Tomb 21 : 1520±150 B.C.
(2) Tomb 54 : 1030±50 B.C.
(3) Tomb 28 : 510±50 B.C.
(4) Tomb 87 : 430±50 B.C.

**Butkara II**
North Pakistan
(Iron Age Graves)
(1) Tombs : 464±40 B.C.

**Swat Valley Graves**
North Pakistan
(Late Bronze Age—Early Iron Age)
Period I Grave : 1430±60 B.C.
Period III Grave : 855(?) B.C.

**Rana Ghundai**
Baluchistan
RG I (upper-most level) Chalcolithic P-2148 : 4470±60 B.C. (6420±60)
RG IIIa Late Chalcolithic
P-21493 : 3380±60 B.C. (5330±60)

# *Rendering Russian Terms in English Through Roman Script*

IT IS NEITHER easy nor possible to translate all Russian terms in any other language to the satisfaction of all .Besides different methods in vogue, and one can therefore follow any one of them, it must be remembered that the Soviet Union is a multi-lingual country, like India, which creates a different kind of problem also. For Soviet Central Asia it is particularly so since it is dominated by Persian and her cognate languages. Even, Paria, a dilect of the Punjab, is spoken in Tadjikistan. Obviously, Russians have also transcribed the local terms in their own way since the existing Russian alphabets cannot accurately transcribe every native term of Central Asia. Now if Russian spelling has to be followed it will be Tadzhikistan for simple Tadjikistan or Tajikistan; or Tedzhen for simple Tedjen or Tejen; or Djzheitun for simple Djeitun or Jeitun. Mellart has tried to simplify them by using Tajikistan, Tejen, Jeitun, etc., but other writers have not done so. ***Antiquity, East and West*** and other journals have also used their own spellings.

In this jungle of a problem we have tried to strike a balance by using two different sets of spellings, in figures and in the text, rather apologetically, since we know it is neither scientific nor it follows any fixed rule. And we plead guilty. Still, the best way, it appears to us, is to state the facts as they have appeared in this book, as also quote a couple of authors who have used different spellings. In this context, we will also point out that the same author in one and the same writing has used two different spelling so that those who are familiar with one set of spellings are able to find their own set as well as the new set.

The examples given below have been takeh from G (Gupta), T (Tosi), F (Frumkin), R (Ranov), M (Mellart), L (Lyonnet), D (Dupree), S (Sarianidi).

Ajina (G) = Adzhina (F)
Akcha (G) (F) = Akca (T)
Ak Kupruk (G) = Aq Kupruk (D)
Altin (G) = Altyn (T) (F)
Auchin (G) = Ahuein (T) =Aucin (S)
Chagali (G) = Cagally and Cagylly (T) = Chagally and Chagylly (F)
Chong (G) = Cong (T)
Dahistan (G) = Dahestan (T) = Dakhigtan (S)
Dashlidji (G) = Dashlidzi and Dasly (T) = Dashlydzhi (F)
Djebel (G) = Dzebel (T) = Dzhebel (F)
Djeitun (G) Jeitun (M) Dzejtun (T)
Dzheytun (F)
Geoksyur (G) = Geoksjur (T) Geoksiur (F)
Khlopin (G) = Hlopin (T)
Mondjukly (G) = Mondzukly (T) = Monzhukly (F)
Murgab (G) = Murghab (T)
Oxus (G) = Oxdus (R)
Shoturgai (G) = Soturgai (L) = Shoturghai (R)
Tadijikistan (G) = Tadzhikistan (F) Tajikistan (M)
Uzboi (G) = Uzboy (F) Uzboj (T)
Yalangach (G) (F) = Jalangac (T) =
Yaz (G) = Jaz (T) )F)

# *Numbering System of the Figures*

Each chapter opens with a few figures which are general in character and their numbers are prefixed by the number of the chapter as also by the letter S which stands for 'Special', *e.g.*, S. 3.1. All of these are not necessarily referred to in the text, nevertheless they have been found most helpful aids.

Within the chapter, there are two types of illustrations—figures of antiquities and maps; the former bear running numbers prefixed by the number of the Chapter (*e.g.*, Fig. 2.9, where 2 stands for the chapter and 9 for the figure) while the latter bear running numbers prefixed by M (M stands for map).

# *Author's Preface*

TILL RECENTLY, we have been looking towards Mesopotamia and Iran, generally called West Asia, for the beginning of all the major cultural horizons in India and her borderlands, beginning from 40000 B.C. and coming down to 400 B.C. Fairservis, Allchin, Wheeler, Sankalia, Mughal, Asthana and others who worked hard to understand the dynamics of early cultures in this part of the world again and again referred to Catal Huyuk and Boghaz Kui in Turkey; Jarmo, and Ur in Iraq, and Sialk, Hissar and Shah Tepe in Iran. No one of them ever thought, except Mughal and Asthana, that Central Asia is also a potential region with which South Asia interacted intimately. They are not to be entirely blamed since practically all worthwhile publications on Soviet Central Asian protohistoric archaeology were in Russian and that too not available readily. Although, during the last decade, the Soviets liberalized their policy towards the publication of the results of their archaeological researches in non-Russian languages and towards the distribution of their journals, etc., yet not enough attention could be paid to them mainly due to language barrier. Monographs in English were rare. Mongait's *Archaeology in the USSR* (1960) had a clear bias for Medieval period, while G. Frumkin's *Archaeology in Soviet Central Asia* (1972) displayed great interest in post-500 B.C. period. First really significant monograph on pre-Achaemenid period was published by V.M. Masson and V.I. Sarianidi in 1972: *Central Asia, Turkmenia before the Achaemenids*. It was very well received by scholars but for them it was also too short because it eliminated 'detailed discussions of vital historical and cultural issues raised by the data, and too generalized to the point where the reader is often frustrated' (G.F. Dales 1975; Review of the book in *The Art Bulletin*, LVII, pp. 571-73). But, will the present volumes quench the thirst for more data and meaningful discussions on vital issues? The author is convinced, they will not, for these volumes are also too short to come up to their expectations. Not only that, these are concentrated on archaeological data, almost to the exclusion of data on technological, ethnographic and osteological archaeology, as also on plastic art. The author wishes he could manage all this but he has been faced with two difficulties: regional publications, whose long list Frumkin has painstakingly prepared and most admirably given in his monograph, are only rarely available to him and, secondly, his interest as an Indian archaeologist has been deeper on the questions concerning cultural and economic interaction of South Asia with Central Asia and other related problems than on anthropological, palaeontological and art studies. However, some attention has been paid to them in Volume I which concerns Stone Age archaeology for it is obvious that the Stone Age cultures cannot be appreciated without detailed reference to the contemporary environment which conditioned man's cultural life to a great extent. He, however, feels that from the Neolithic onwards the process was reversed: 'culture' started controlling the 'environment' and also changing the genetics of men, animals and plants in a very significant manner and, therefore, it should be studied in greater depth. He often feels frustrated when scholars talk too much about the 'natural constraints' on protohistoric cultures because, to him, the growth of culture actually means growth in the capacity of human beings to control the natural constraints through technology. He is, however, not unmindful to these constraints. He has, in fact, dealt with the hydrological constraints in depth, but in these volumes, limited as they are in space for various reasons beyond his control, he decided to remain content mainly with the material manifestations of culture and the manner in which one culture interacted with the other. In this attempt he is standing on the citadel of Kalibangan in Rajasthan and looking at the Ziggurat of Altin-Depe in south Turkmenia with binoculars on his eyes which is surveying the intervening alluvial plains and valleys of the Indus system, the rugged mountains of Baluchistan and Afghanistan, the important passes through which men crossed the hills, the deserts and the bad-lands of eastern Iran, and a variety of landscapes which characterize the Soviet Central Asia. His approach is, therefore, different from the Irano-centric approach of the two Soviet authors which became the central point of criticism in the hands of Lamberg Karlovsky (*Antiquity*, XLVII, 1973, pp. 43-46) and Tosi (*Mesopotamia*, VIII-IX, 1973-74, pp. 21-76). We, however, do not negate the claims of Iranian contributions to the cultures of south Turkmenia, but we do contest their tall claims. Our position is clear : each culture is a unique creation of its own environment, people and historical circumstances even though it may receive a lot of impulses from others.

How do we then look at the protohistoric cultures of Soviet Central Asia? To us, they form a distinct group by themselves. They are organically related to each other. Their evolutionary process is logical. It is multilinear. They, therefore, do not form merely 'the northern frontier of Iran'.

We take the phenomenon of culture-interaction as a very vital factor underlying change and growth. Not only one Central Asian culture of southern region interacted with the other Central Asian culture of the southern region, but also most of the cultures belonging to south Turkmenia, Bactria and south Tadjikistan interacted with a number of non-Central Asian cultures of Afghanistan, Baluchistan, Siestan and the Indus through trade or limited migration or both. To us, on the whole, Central Asia's interaction with South Asia was as significant as her interaction with West Asia and, therefore, it must be visualized in clearer terms than was possible so far. Afghanistan, Baluchistan, Siestan, North-West Frontier of Pakistan, Kashmir Valley, Kangra Valley, Potwar and Ravi basin must now attract our attention.

The author has here paid some attention to them, but he is also aware of the dangers involved in it : in the process he may have made the mistakes others have made earlier. Still, he categorically refutes the age-old theories which have so far been looking at Afghanistan and Baluchistan as 'refuge areas' of West Asian cultures, and boldly proposes that these areas were as much the 'nuclear zones' of the neolithic cultures as the Zagros mountains are often taken to be. The Kashmir Valley and the plains of the Indus system are also viewed as the repository of their own unique cultures. Having once established that, the author has tried to locate the areas, the exact nature and the quantnm of interaction between Central Asia and the Indian Borderlands.

His main concern here has, of course, been the cultures of Soviet Central Asia, and not the cultures of the Indian borderlands. Obviously, the latter cultures do not cover as many pages. But the cultures which played a significant role in the entire process of culture-interaction in the Indian borderlands, such as the Swat Culture, Burzahom Culture, Ror Culture, Late Bronze Age and Early Iron Age cultures (Namazga VI, Yaz I, Sapalli-Dashly, Gandhara Grave, etc.) and which are also associated with the Aryans, have been discussed at some length so that in future scholars are able to take note of the limitations and possibilities of researches on these cultures. On his own part, he has once again very boldly refuted all the theories which try to locate the Vedic Aryans in different grey wares located in Iran and Soviet Central Asia.

× × × × × × × ×

For this volume also the author has once again to thank Shashi Asthana who has ungrudgingly went through all the difficult stages the preparation of a book of this kind undergoes. Without her constant help it would have been practically impossible to go through the proofs even since during its publication the author has been practically confined to bed in high fever. She has also prepared the Index, which has indeed been a very laborious job. Besides her, my friend Dilip Chakrabarty has been most helpful for he went through the entire manuscript and gave some very helpful suggestions.

National Museum
Janpath, New Delhi

S.P.G.

# *Introduction*

BROADLY SPEAKING, Central Asia is the land stretching from the eastern shores of the Caspian Sea to the Great Wall of China, although some scholars include in it Mongolia also. It is divided into two parts by the huge mass of high chain-of-mountains of the Pamir-Alai-Tien-Shan system. The eastern half of this vast span of land now forms part of the Peoples Republic of China while the western half is included in the USSR. The Chinese Central Asia is covered by the province called 'Sinkiang' while the Soviet Central Asia is divided into four republics—from east to west, they are Kirgizia, Tadjikistan, Uzbekistan and Turkmenistan. However, parts of Kazakhstan, which is a geographic area in the north of these Republics, are also included in Central Asia (Fig. G.1).

The majority of the population of Central Asia is now Muslim. But before the 8th to 10th century it was mainly Buddhist. Racially, many of the groups forming this population belonged to the Mongoloid Physical Type, perhaps linked to the Mongolian plateau. Originally, they belonged to the Altai-Baikal region of Siberian peninsula from where they migrated to the region now covered by the Mongolian Peoples Republic. Their empire in Mongolia lasted for two centuries, interrupted by the Chinese only for fifty years (630-682). They left their records over the graves of their rulers, located mostly on the upper reaches of the Orkhon river. They were defeated in 744 by the Uighurians, a clan of the confederation of nine peoples, including the Tu-chueh. Tenth century Muslim geographers called them Toquz Oghuz, some of whom, in the 9th century, moved to the shores of the Aral Sea. These Oghuz (or Ghuzz) are the anscetors of the various Turkoman peoples in the Middle East. It is in the 10th century that they were converted to Islam. They were great fighters and hunters and they migrated far and wide, as the barbaric nomads do. They were known by the term 'Turk', but only from the 6th century A.D. when Chinese called them T'u-Chuch (a transcription of the native Turk). In the early stages, therefore, historians using Muslim and Byzantine sources used the term 'Turkestan' for Central Asia.

But this is an over-simplification of a very complex historical situation. Turkestan has been a multi-racial nation. The Mediterraneans and Proto-Australoids were as commonly found as the Mongoloids. It was a melting-

# *Introduction*

BROADLY SPEAKING, Central Asia is the land stretching from the eastern shores of the Caspian Sea to the Great Wall of China, although some scholars include in it Mongolia also. It is divided into two parts by the huge mass of high chain-of-mountains of the Pamir-Alai-Tien-Shan system. The eastern half of this vast span of land now forms part of the Peoples Republic of China while the western half is included in the USSR. The Chinese Central Asia is covered by the province called 'Sinkiang' while the Soviet Central Asia is divided into four republics—from east to west, they are Kirgizia, Tadjikistan, Uzbekistan and Turkmenistan. However, parts of Kazakhstan, which is a geographic area in the north of these Republics, are also included in Central Asia (Fig. G.1).

The majority of the population of Central Asia is now Muslim. But before the 8th to 10th century it was mainly Buddhist. Racially, many of the groups forming this population belonged to the Mongoloid Physical Type, perhaps linked to the Mongolian plateau. Originally, they belonged to the Altai-Baikal region of Siberian peninsula from where they migrated to the region now covered by the Mongolian Peoples Republic. Their empire in Mongolia lasted for two centuries, interrupted by the Chinese only for fifty years (630-682). They left their records over the graves of their rulers, located mostly on the upper reaches of the Orkhon river. They were defeated in 744 by the Uighurians, a clan of the confederation of nine peoples, including the Tu-chueh. Tenth century Muslim geographers called them Toquz Oghuz, some of whom, in the 9th century, moved to the shores of the Aral Sea. These Oghuz (or Ghuzz) are the anscetors of the various Turkoman peoples in the Middle East. It is in the 10th century that they were converted to Islam. They were great fighters and hunters and they migrated far and wide, as the barbaric nomads do. They were known by the term 'Turk', but only from the 6th century A.D. when Chinese called them T'u-Chuch (a transcription of the native Turk). In the early stages, therefore, historians using Muslim and Byzantine sources used the term 'Turkestan' for Central Asia.

But this is an over-simplification of a very complex historical situation. Turkestan has been a multi-racial nation. The Mediterraneans and Proto-Australoids were as commonly found as the Mongoloids. It was a melting-

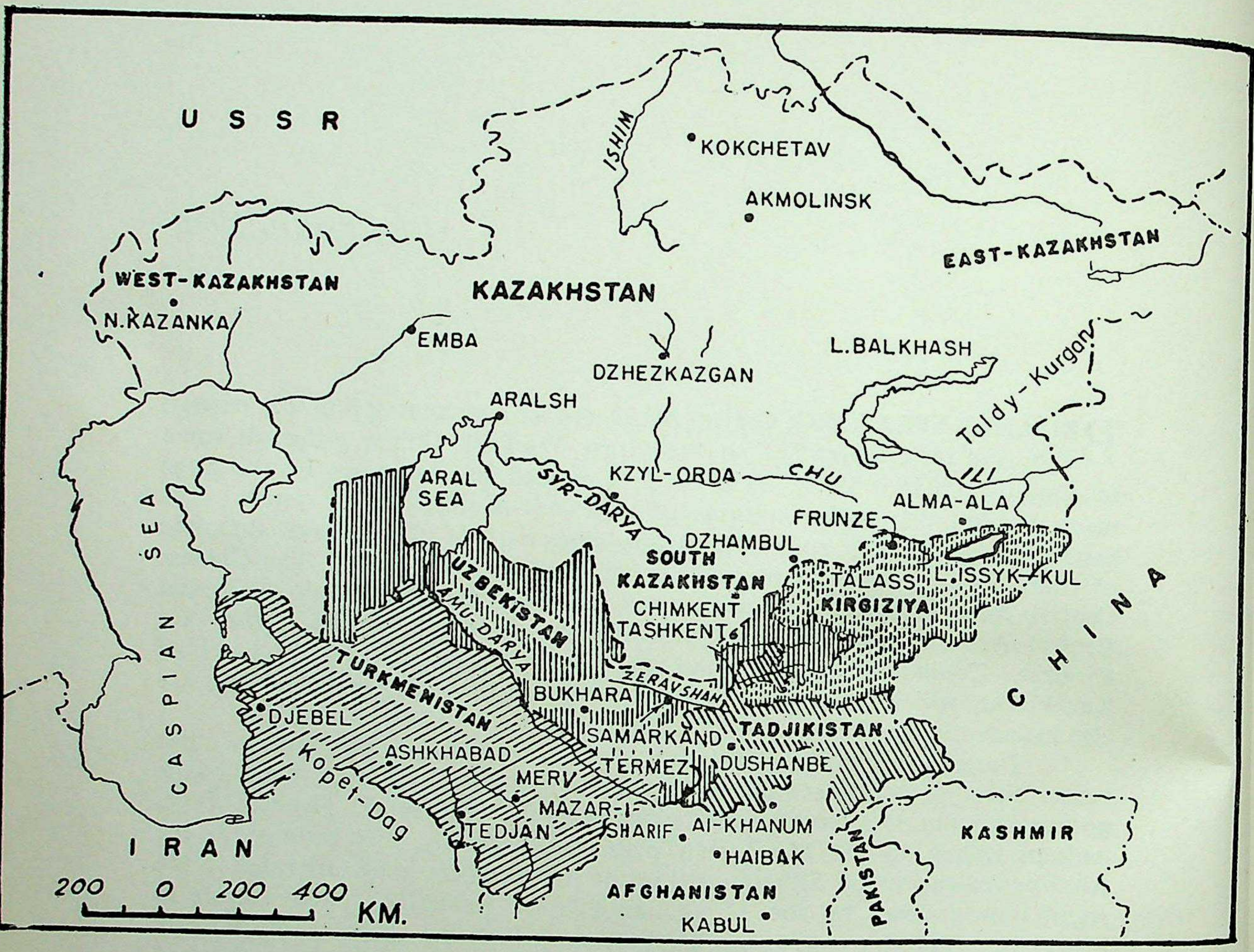

USSR
ISHIM
KOKCHETAV
AKMOLINSK
EAST-KAZAKHSTAN
WEST-KAZAKHSTAN
N.KAZANKA
KAZAKHSTAN
EMBA
DZHEZKAZGAN
L.BALKHASH
Taldy-Kurgan
ARALSH
ARAL SEA
SYR-DARYA
KZYL-ORDA
CHU
ILI
ALMA-ALA
FRUNZE
DZHAMBUL
SOUTH KAZAKHSTAN
TALASS
L.ISSYK-KUL
KIRGIZIYA
CHIMKENT
TASHKENT
UZBEKISTAN
AMU-DARYA
CASPIAN SEA
TURKMENISTAN
ZERAVSHAN
BUKHARA
CHINA
DJEBEL
SAMARKAND
TADJIKISTAN
ASHKHABAD
Kopet-Dag
TERMEZ
DUSHANBE
MERV
MAZAR-I-SHARIF
TEDJAN
AI-KHANUM
HAIBAK
PAKISTAN
KASHMIR
IRAN
200 0 200 400
KM.
AFGHANISTAN
KABUL

Fig. G.1. Political map of Soviet Central Asia. *After Frumkin*

pot of peoples and cultures coming from all directions—Chinese from the east, Indians from south, Iranians and Graeco-Romans from the west and the nomadic tribes from the north. It may, however, be mentioned that the Iranians, as we known them in history, did not in those days confine themselves to the present-day boundary of Iran. They were inhabiting the Central Asian region, up to Tadjikistan, from where they migrated to Chinese Central Asia. Sogdians and Bactrians had very large territories before the 9th century. This is now a well-known chapter of Iranian history and its period stretches back to five or six centuries before Christ, roughly up to the Achaemenids. There is, however, a lesser known period of their history. It is the period far beyond the times of Darius and Xerxes when writing was unknown to the people and the Greek cities had not come into existence in any part of Central Asia. This is the 'prehistoric period', which includes 'protohistoric' also.

The prehistoric-protohistoric period has two major sub-divisions: the earlier (*i.e.*, older) is characterised by nomadic pattern of life, when the tools were made of bone and stone, and the later, which is characterised by settled habitations, when the tools were made of not only bone and stone but also of copper and/or bronze. In certain quarters, it is customary to call the earlier period exclusively as 'prehistoric', and the later exclusively as 'protohistoric'. Here we have followed a broad-based periodization of the latter usage, just on grounds of expediency since we know that it is not correct (Ghosh 1975-76). We have included the Neolithic period also in protohistory because sedentary life starts from this period itself, the neolithic sites may or may not have yielded copper objects. In Vol. I we have dealt with the prehistoric period, *i.e.*, from the Palaeolithic to the Mesolithic, while in the present volume (Vol. II) we are dealing with the protohistoric period, *i.e.*, from the Neolithic to the Early Iron Age (Fig. G.2).

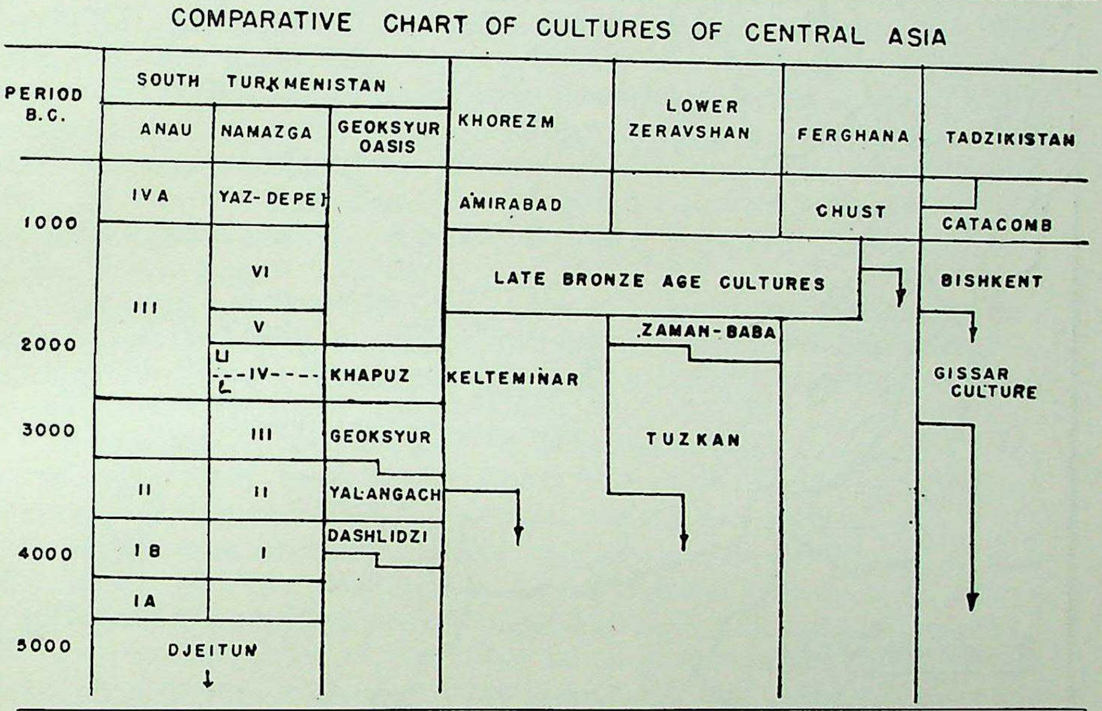

COMPARATIVE CHART OF CULTURES OF CENTRAL ASIA
PERIOD B.C.
SOUTH TURKMENISTAN
ANAU
NAMAZGA
GEOKSYUR OASIS
KHOREZM
LOWER ZERAVSHAN
FERGHANA
TADZIKISTAN
1000
2000
3000
4000
5000
IV A
YAZ-DEPE
AMIRABAD
CHUST
CATACOMB
VI
III
V
LATE BRONZE AGE CULTURES
BISHKENT
ZAMAN-BABA
U
IV
L
KHAPUZ
KELTEMINAR
GISSAR CULTURE
III
GEOKSYUR
TUZKAN
II
II
YALANGACH
DASHLIDZI
I B
I
I A
DJEITUN

Fig. G. 2. The Chart is after Masson. The relative dating of Namazga IV and V appear to be a little on the higher side; Namazga V may to go back to 2200 B.C. or still earlier

It has widely been recognized that as we go back in time, the role of natural environment in shaping the culture is found predominant. The form and content of the prehistoric cultures of Central Asia go a long way to establish the validity of this view.

× × × × × ×

As one can easily make out from the physical map of Asia, Soviet Central Asia may be divided into two major physiographic divisions: one is characterized by clay or salt marsh-plains, and also by dry sandy or gravelly steppe, while the other is marked by extensive mountain systems

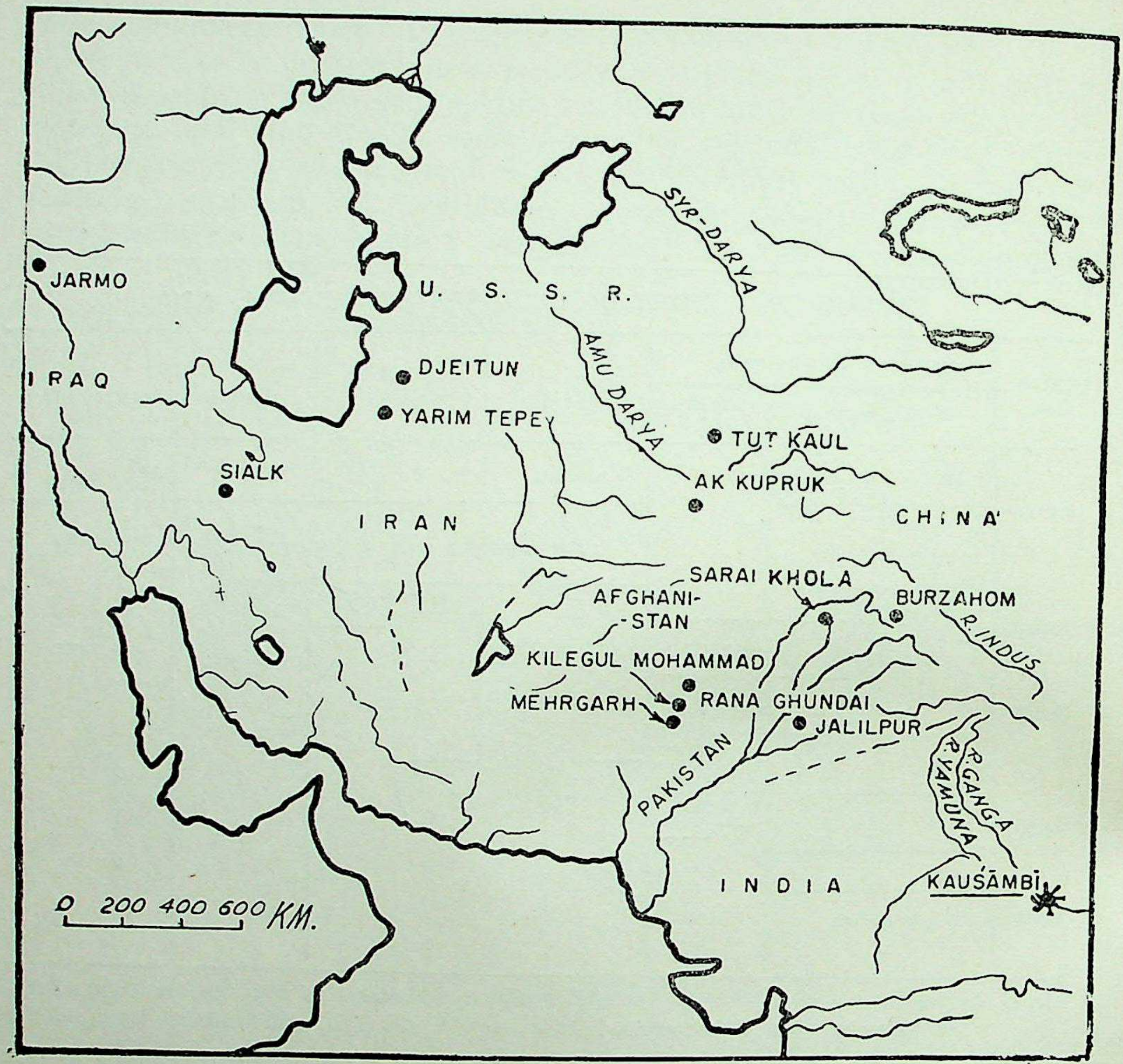

JARMO
IRAQ
U. S. S. R.
SYR-DARYA
AMU DARYA
DJEITUN
YARIM TEPE
SIALK
TUT KAUL
AK KUPRUK
IRAN
CHINA
SARAI KHOLA
AFGHANI-STAN
BURZAHOM
R. INDUS
KILEGUL MOHAMMAD
MEHRGARH
RANA GHUNDAI
JALILPUR
PAKISTAN
R. GANGA
R. YAMUNA
INDIA
KAUŚĀMBĪ
0 200 400 600 KM.

**Fig. G.3.** **Map showing some early sites in Soviet Central Asia and the Indian borderlands, the area of our study**

which jut out to the south and the south-eastern borders of the lowlands. Also to the north and east there are the vast mountainous highlands of the Tien-Shan and Pamir-Alai systems. It may, however, be mentioned that during the protohistoric times it is the alluvial sand and soil on the piedmont of Kopet-Dag which played the most important role, while during the prehistoric times, the Stone Age, even the mountainous regions and sandy light soil regions in the deserts played important roles. This was also the situation in certain regions of India, as will be shown later. But it must be remembered that it is only broadly so since protohistoric sites are also located in the mountainous and sandy zones, albeit without urban content.

The Republic of Kirgizia is largely comprised of the Tien-shan ranges to the south-west of which lies the great Fergana Valley. Further south, there is the second mountainous region embracing the south-eastern part of Uzbekistan and the neighbouring region of Tadjikistan. A number of these ranges, belonging to the Pamir-Alai system, pass through this area. Some of these ranges are the Zaravshan, the Hissar (or Gissar), the Baba Tag, the Peter-the-First, the Trans-Alai, and the Darvaz. On the south, this mountainous country is bound by the Amu Darya (Oxus River), which furthermore serves for a considerable distance as the boundary between the Soviet Union and Afghanistan. To the west of them rises the Kopet Dag chain of mountains, marking for a long distance the boundary between Iran and Turkmenia. The Kopet Dag, in fact, is part of the Turkmeno-Khorasan system of mountains. At a relatively low level (up to 3,300 m above Mean Sea Level) these mountains merge with the Elburz range in the west, beyond USSR, and with the Parapamir in the east, thus forming the northern frontier of the Iranian plateau. It is significant to note that the plant and animal life of the Kopet Dag region too is similar to Iran in particular and the Near East in general. (Fig. G. 5).

The eastern shores of the Caspian Sea are also dotted with some low ranges, such as the Djebel, which provided shelter to the wandering groups of prehistoric men in the same manner as the Pamirs provided to them in Tadjikistan, and Bukhara provided to them in Uzbekistan.

Besides these mountains, the land is covered by two wide-spread deserts, the one immediately north of the Kopet Dag chain of hills is Kara-Kum and the other spanning the Syr Darya region is Kyzy-Kum. (Fig. G. 4).

Beyond these most inhospitable and desolate deserts lie the plateau of Kazakhstan which eventually enters into the highland plateaus of Siberia.

Soviet Central Asia is, however, a land of rivers, although, unfortunately, most of them have been of very little use to human beings. The Syr and the Amu pass through some of the most pronounced arid zones of the world and end up in the Aral Sea which is also located in the same climatic zone. All of them lie in the land-locked and dry hot country, and, therefore, they serve very little purpose in matters of trade and movement of people. Also, it was extremely difficult to bring water to the fields from the main channel of the Amu Darya except in the deltaic regions. Obviously, for purposes of agriculture also it was of little use. Now, of course, the situation has vastly changed, a canal, called Kara-Kum canal, has been constructed which passes through the foothills of the Kopet Dag. It has brought a large area under cotton cultivation, but, anciently, it was more or less a desolate land. Syr Darya basin had too exacting climatic conditions for the growth of early agricultural communities. In the delta of these rivers, however, early cultures could survive but not grow beyond a particular level. It may also be mentioned that the tributaries of these rivers had no better land and climate to offer, except in patches, as Oases. Similar was the situation in the basins of the rivers like Zaravshan, Tedjen, Murgab, and others. (Fig. G. 4).

This is precisely the reason why early cultures in Soviet Central Asia developed more in the oases and in the loessic deposits of the sub-mountainous

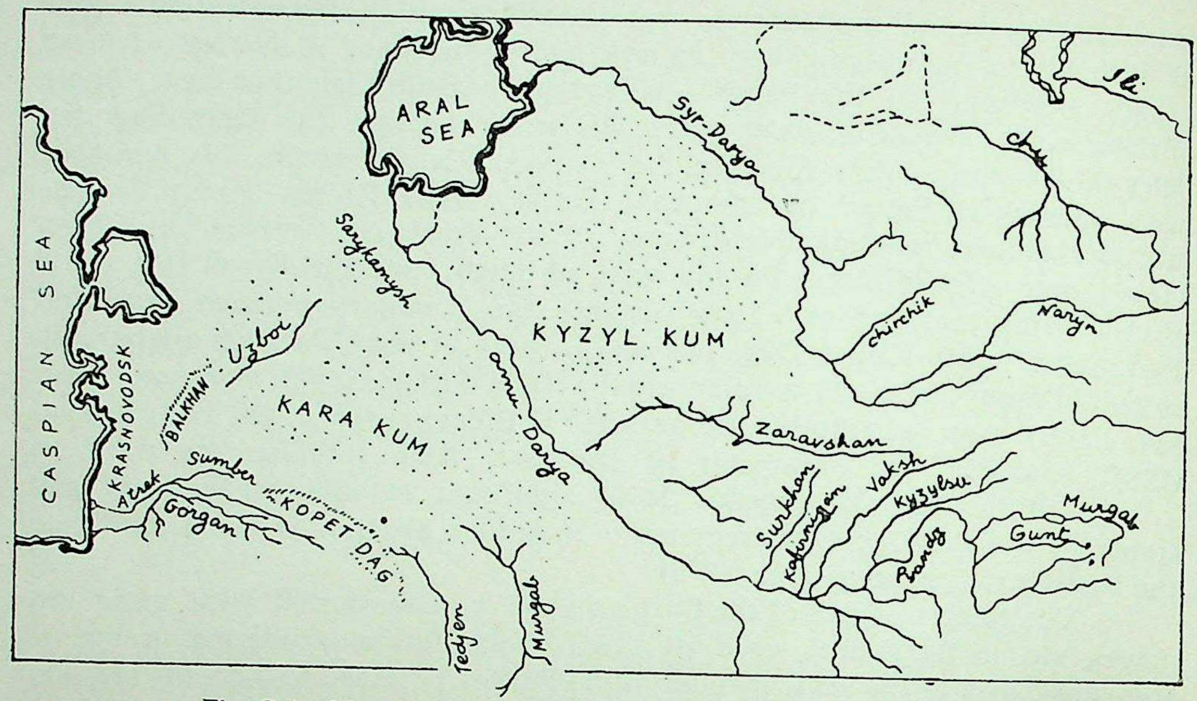

ARAL SEA
CASPIAN SEA
Ili
Syr-Darya
Chu
Sarykamysh
KYZYL KUM
Chirchik
Naryn
Uzboi
BALKHAN
KRASNOVODSK
KARA KUM
Amu Darya
Zaravshan
Sumber
Atrek
Gorgan
KOPET DAG
Surkhan
Kafirnigan
Vaksh
Kyzylsu
Murgab
Gunt
Bartang
Tedjen
Murgab

Fig. G.4. Map showing important rivers and deserts of Central Asia

zones of the ranges like Kopet Dag than in the river valleys as such. The valleys of the Pamir and Tien-Shan in Uzbekistan, Tadjikistan and Kirgizia have also not been hospitable for the proper development of the settled communities. They are usually at a great height, in some places under very hot

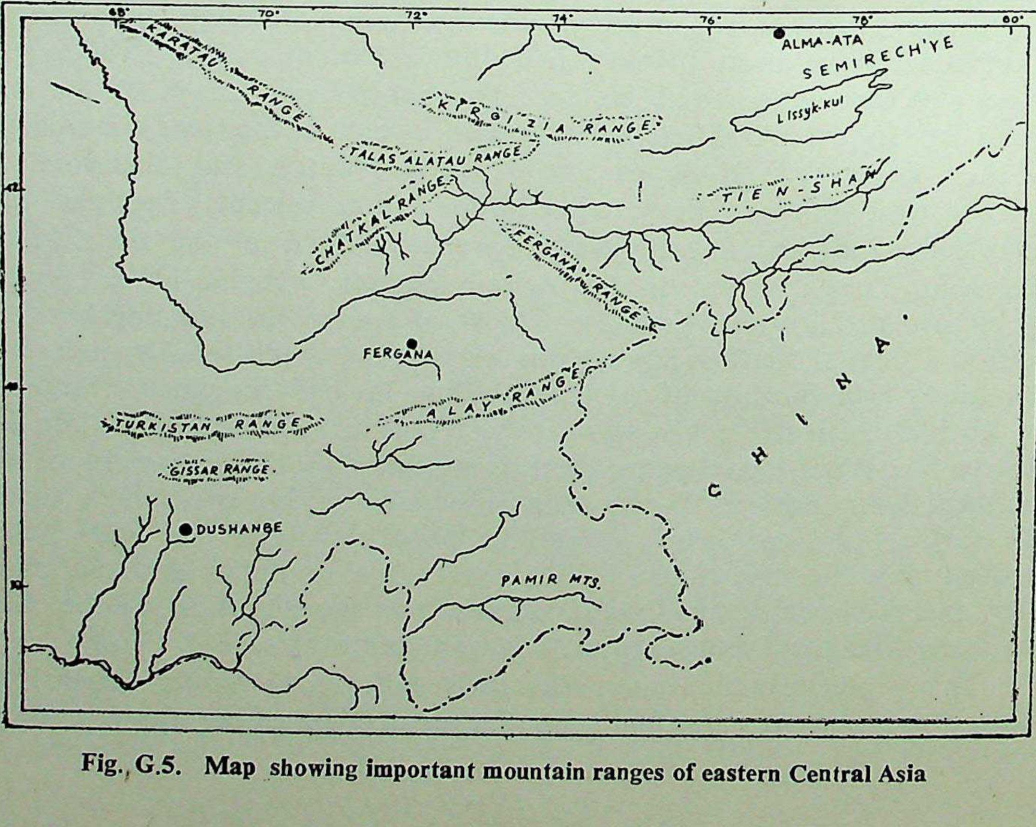

68°
70°
72°
74°
76°
78°
80°
ALMA-ATA
SEMIRECH'YE
Issyk-Kul
KARATAU RANGE
KIRGIZIA RANGE
TALAS ALATAU RANGE
TIEN-SHAN
42
CHATKAL RANGE
FERGANA RANGE
FERGANA
CHINA
40
ALAY RANGE
TURKISTAN RANGE
GISSAR RANGE
DUSHANBE
38
PAMIR MTS.

Fig. G.5. Map showing important mountain ranges of eastern Central Asia

conditions, such as those near the Teshik-Tash caves, in Uzbekistan, and in others under very cold conditions, such as Osh-Khona in Tadjikistan. Some of the tributaries of the Amu in Tadjikistan, such as the Vaksh and Kafirnigan, offered good land and climate in their lower reaches but the area of favourable land has been extremely limited; only by higher technology of the early centuries of the Christian era its scope could be enlarged afresh.

The geomorphological features of Chinese Central Asia are equally rugged along the mountainous zones, flat and undulating by turn, across the vast stretches of the Taklamakan desert. Sinkiang is like a deep bowl. On the north, it is bound by the Tien-Shan mountains and, on the south, by the high ranges of the Kuen-Lun. The eastern borders are marked by the hills of the Nan-Shan while the western borders are demarcated by the Pamirs. On the eastern extremity lies the world's greatest dried up salt lake, the Lop-nor. Cutting across the Taklamakan is the east-west running long and desolate Tarim river which springs up in the Pamirs and ends up in the Lop-nor. Some of its important tributaries, such as the Khotan Darya, the Cherchan Darya and the Yarkand Darya, emerge from the Kuen-Lun. But, as in Soviet Central Asia, the rivers here pass across the vast stretches of dull and dry deserts of the Taklamakan. They have also been practically of no use, being the daughters of the most inhospitable land of Asia. In this parts of Central Asia also, therefore, habitation developed either in the oases or along the sub-mountainous regions.

Thus, the two Central Asias together present a picture of a land which may be called 'the area of relative isolation'. The entire course of their preliterate history has been determined by this single geographical factor. Not that attempts were not made to overcome the limitations inherent in this kind of environmental setting but they could not succeed beyond a particular level, which was, of course, conditioned by other factors also, such as technology, trade and religion.

We have very little archaeological evidence of the life of the people in prehistoric and protohistoric periods in Chinese Central Asia and, therefore, we have concentrated on Soviet Central Asia from where we have now ample material. However, we have included an appendix on a group of neolithic stone tools collected by Sir Aurel Stein some sixty years ago. A similar collection was also made here by Bergman, and, therefore, the analysis of this collection, as also of others, is also included in it.

# *List of Figures*

INTRODUCTION

G.1=Political map of Soviet Central Asia, p. xviii.
G.2=Chart showing sequence of protohistoric cultures in different regions of Soviet Central Asia, p. xix.
G.3=Map showing some early sites in Soviet Central Asia and the Indian borderlands, the area of our study, p. xx.
G.4=Map showing important rivers and deserts of Soviet Central Asia, p. xxii.
G.5=Map showing important mountain ranges of eastern Soviet Central Asia, p. xxii.

THE NEOLITHIC

S.1.1=Terracotta head from Djeitun Culture, p. 1
S.1.2=Pottery from Djeitun Culture, p.1
S.1.3=Map showing sites of Neolithic and Chalcolithic cultures, p. 2
S.1.3a=Map showing Different Neolithic Cultures, p. 3
1.1=Djeitun Neolithic sites, p. 4
1.2=Djeitun Culture at a glance, p. 7
1.3=Houses in Djeitun village, p. 8
1.4=Three phases of Djeitun Culture, p. 12
M.1.1=Map of Central Asian Neolithic groups, p. 15
(Error : Lakau, read Lavlakan)
1.5=Caspian Neolithic flint tools, p. 18
1.6=Kelteminar pottery, p. 19
1.7=Kelteminar flint tools, p. 20
1.8=Kelteminar pottery (Khorezm), p. 20

1.9=Gissar pebble tools, p. 21
1.10=Gissar neolithic tools, p. 22
1.11=Gissar stone and bone tools, p. 23
1.12=Tut-Kaul Section, p. 24
1.13=East Punjab sites, p. 28
1.13a=Ror stone tools, p. 29
1.14=Chart of Ceramic Neolithic, northern Afghanistan, p. 33
1.15=Ak-Kupruk pottery, p. 36
1.16=Burzahom Neolithic Complex, p. 39
1.17=Ak-Kupruk stone and bone tools, p. 43

## THE CHALCOLITHIC

S.2.1=Terracotta figurine, Dashlidji-Depe, p. 53
S.2.2=Painted pottery, Kara-Depe, p. 54
S.2.3a=Map of Neolithic and Chalcolithic Cultures, p. 54
S.2.3=Map of Chalcolithic cultures, p. 55
2.1=Central Asian Protohistic pottery sequence, p. 57
2.2=Chart : Iranian and Turkmenian culturalcorrelations, p. 58
2.3=Pre-Anau-Anau correlation, p. 59
2.3a=Painted pottery, Chakmakli-Depe, p. 59
2.3b=Culture at a glance, Chagalli-Depe, p. 60
(Error : printed as 2.13b)
2.4=Anau I pottery, p. 64
M.2.1=Map, Namazga I sites, p, 65
2.5=Yassi-Depe, painted shrine-walls, p. 69
2.6=Namazga I : clay objects, p. 70
2.7=Namazga I : bone, metal and stone objects, p. 72
2.8=Dashlidji Culture at a glance, p. 74
2.9=Chalcolithic (Geoksyur) kiln, p. 75
2.10=Dashlidji female torso, p. 76
2.11=Shift of Cultures in Tedjen delta, p. 77
2.12=Correlation of Chalcolithic cultures in Geoksyur, p. 78
M.2.2=Map of Namazga II sites, p. 79
2.13=Human figures on Namazga II pottery, p. 79
2.14=Chalcolithic metal tools, p. 81
2.14a=Chalcolithic copper tools, p. 82
2.15=Yalangach Culture at a glance, p. 83

2.15a=Building horizons of Geoksyur sites, p. 84
2.16=Settlement at Yalangach-Depe, p. 85
2.16a=Settlement Yalangach-Depe, another view, p. 85
2.17=Yalangach female figurine, p. 86
2.18=Yalangach House-plans, p. 87
2.19=Geoksyur Culture at a glance, p. 89
2.19a=Tholoi graves at Geoksyur 1, p. 90
2.20=Tepe Fullol gold and silver objects, p. 91
M.2.3=Map of Namazga III sites, p. 92
2.21=Zoomorphic motifs on Namazga III pottery, p. 93
2.22=Geoksyur pottery kiln, p. 93
2.23=Female figurines from Kara-Depe, p. 95
2.24=Terracotta Seals from Kara-Depe, p. 96
2.25=Settlement plan at Akcha-Depe, p. 97
2.25a=Settlement plan at Akcha-Depe, another sector, p. 97
2.26=Hydrological changes in Geoksyur Oasis, p. 98
2.27=Population growth and shift in Geoksyur, p. 99
2.28=Geoksyur painted pottery, p. 100
2.29=Geoksyur painted pottery, p. 10
2.30=Clay bone, stone and metal objects, Geoksyur, p. 102
2.31=Stone objects from Geoksyur, p. 103
2.31a=Clay objects from Geoksyur, p. 104
2.32=Evolution and Interaction among Chalcolithic potteries, p. 105
2.33=Origin of Geoksyur geometric designs, p. 106
2.34=Formation of cross-shaped motif, p. 107
2.35=Geoksyur mud-brick grave-chamber, p. 108
2.36=Irrigational canals in Geokosyur, p. 110
2.37=Cultural levels through pottery in Geoksyur, p. 111
2.38=Houses of Pds. I and II (plan) at Mundigak, p. 112
2.38a=Pottery and stone objects, Mundigak, p. 113
2.38b=Mundigak Culture : III and IV pds. at a glance, p. 114
2.38c=Houses of pds. III and IV (plan), Mundigak, p. 115
2.38d=Mundigak, Male stone-head, p. 116
2.39=Polychrome pots from Shahr-i Sokhta, p. 117
2.39a=A Nal-type pot from Shahr-i Sokhta, p. 119
2.39b=Stone and metal seals, Shahr-i Sokhta, p. 120
2.40=Damb Sadaat and Namazga pottery, Comparison, p. 122
M.2.4=Map showing Indian borderland sites, p. 123

2.40a=Namazga and Mundigak designs, comparison, p. 124
2.41=Pottery from Mehrgarh, p. 124
2.41a=Quetta Ware with paintings, p. 125
2.42=Stone seal from Said Kala Depe, p. 127
2.43=Namazga motifs in Indus plains, p. 128
2.43a=Terracotta female figurine from Gumla, p. 128
2.44=Seal and figurines from Mehrgarh, p. 129
2.45=Namazga motif at Sarai Khola, p. 129
M.2.5=Map of Cultural and Economic interaction, p. 131

THE BRONZE AGE

S.3.1=Female figurine, Namazga V, p. 133
S.3.2=Painted pottery, Namazga IV, p. 133
S.3.3=Bronze Age cultures, distribution, p. 135
S.3.3a=Bronze Age sites in Turkmenia, etc., p. 134
3.1=Namazga IV-V Culture at a glance, p. 137
M.3.1=Namazga IV sites, p. 138
3.2=Namazga IV pottery, p. 139
3.3=Terracotta and clay toilet-boxes, p. 139
3.4=Grey pottery from Ak-Depe, p. 142
3.5=House plan at Altin-Depe, p. 143
3.6=Painted pottery, Namazga IV, p. 144
3.7=Camel head (terracotta), Namazga V, p. 149
M.3.2=Map showing Namazga V sites, p. 152
3.8=Namazga V pots, p. 153
3.9=Namazga-Depe mound, p. 154
3.10=Altin-Depe mound, p. 155
3.11=Part of Ziggurat, Altin-Depe, p. 156
3.12=Altin-Depe settlement (plan), p. 157
3.13=Bronze Age metal tools, South Turkmenia, p. 161
3.14=Bronze Age metal objects, South Turkmenia, p. 161
3.15=Metallic seals and pottery motifs, comparison, Namazga V, p. 162
3.16=Incised marks on terracotta figurines, Altin-Depe, p. 165
M.3.3=Map of selected etc., sites, West Asia and South Asia, p. 166
3.17=Harappan and Turkmenian objects, comparison, p. 167
3.18=Altin's frying pan and spear-head (Error : celt), p. 168
3.19=Harappan seal at Altin-Depe, p. 168

3.20=A silver seal from Altin-Depe, p. 169
3.21=Ethiphallic male figurines, Namazga V, p. 170
3.22=Zaman-Baba Culture at a glance, p. 173
3.23=Bronze objects from Khaaka Hoard, p. 174
3.24=Namazga-Depe mound showing Watch Tower area, p. 176
M.3.4=Map of Namazga VI sites, p. 176
3.15=Namazga-Depe, Watch-Tower (plan), p. 178
3.26=Namazga-Depe; pottery kiln, p. 179
M.3.5=Map of Late Bronze Age sites, p. 181
3.27=Namazga VI Culture at a glance, p. 182
3.28a=Tahirbai-3 pottery, p. 183
3.28b=Tahirbai-3 pottery, p. 183
3.28c=Tahirbai-3 pottery, p. 184
3.29=Cairn burial in Khorezm, p. 186
3.30=Andronovo pottery, p. 187
M.3.6=Map of Kurgans and Balbas in Kirgizia, p. 189
3.31=Andronovo pottery and metal objects, p. 190
M.3.7=Map of Late Bronze Age—Early from Age sites, p. 191
3.32a=Tulkhar graves, p. 192
3.32b=Tulkhar graves, p. 193
3.32c=Tulkhar graves, p. 193
3.32d=Tulkhar graves, p. 194
3.33=Tulkhar pottery, p. 194
3.34=Tulkhar metallic objects, p. 195
M.3.8=Map of Afghanistan, Late Bronze Age sites, p. 196
3.35=Southern Bactria : Some sites, p. 197
3.35a=Dashli Culture sites in northern Afghanistan, p. 198
3.35b=Fortification at Dashli sites, p. 198
3.36=Excavated remains at Dashli, p. 198
3.37=Round structure at Dashli-3, p. 199
3.38=Animal burials at Dashli, p. 100
3.39=Dashli pottery, p. 200
3.39a=Dashli jars, p. 200
3.39b=Pedestalled cups at Dashli, p. 201
3.39c=Dashli pottery types, p. 202
3.39d=Dashli Culture at a glance, p. 202
3.39e=Sapalli Tepe structures (plan), p. 203
3.39f=Sapalli Tepe pottery, p. 204

3,39g=Sapalli Culture at a glance, p. 204
3.39h=$^{14}$C dates of Sapalli sites, p. 205
3.39i=Dahistan pottery and grave, p. 206
3.40=Ghaligai pottery sequence, p. 207
3.41=Swat Valley Grave sites, p. 209
3.42=Swat Valley Culture-complex, p. 213
3.43=Distribution of Grey Ware sites, p. 215

## EARLY IRON AGE

S.4.1=Tagisken burial monuments, p. 221
S.4.2=Yaz I pottery from Ulug-Depe, p. 221
S.4.3=Sites of Late Bronze and Early Iron Age, p. 222
S.4.3a=Iron Age Cultures : distribution map, p. 223
4.1=Pottery, metal and stone objects : Dahistan, p. 225
4.2=Yaz-1 site (plan and section), p. 226
4.2=Yaz-1 bronze tools, p. 227
4.4=Yaz-1 pottery, p. 228
4.5=Chust Culture objects, p. 223
4.6=Dalverzin Tepe metal objects, p. 224
4.7=Dalverzin Tepe pottery, p. 225
4.8=Chust Culture : Painted designs on pots, p. 226
M.4.2=Map of Grey Ware groups, (Error) p. 241

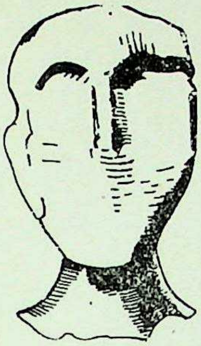
## THE POLEMICS

S.5.1=Kara-Depe terracotta figurine, p. 249
S.5.2=Harappan seals, etc., p. 249
S.5.3=Culture-movement map, p. 250
S.5.3a=Important Protohistoric sites, p. 251
5.1=Hydrological map of Soviet Central Asia , p. 254
5.2=Faunal representation on pottery, p. 255
5.3=Diagram of 'Central Place' theory, p. 256
5.3a=Location map of Shoturgai, p. 257
5.3b=Pottery from Shoturgai, p. 257
5.3c=Harappan pottery from Shoturgai p. 258
5.3d=Shoturgai's seven stations, map, p. 258
5.4=Harappan areas of economic influence, p. 259
5.5a=Locational map of Mehrgarh, p. 260

5.5b=Harappan and Pre-Harappan pottery : Mehrgarh, p. 261
5.6=Namazga II-III elements at Mundigak, p. 262
5.7=Chronological chart of South Asian cultures, p. 265
5.8=Distribution of figurine types (female), p. 281
5.9=Map of Harappan sites, p. 282
5.10=Painted Grey Ware pots

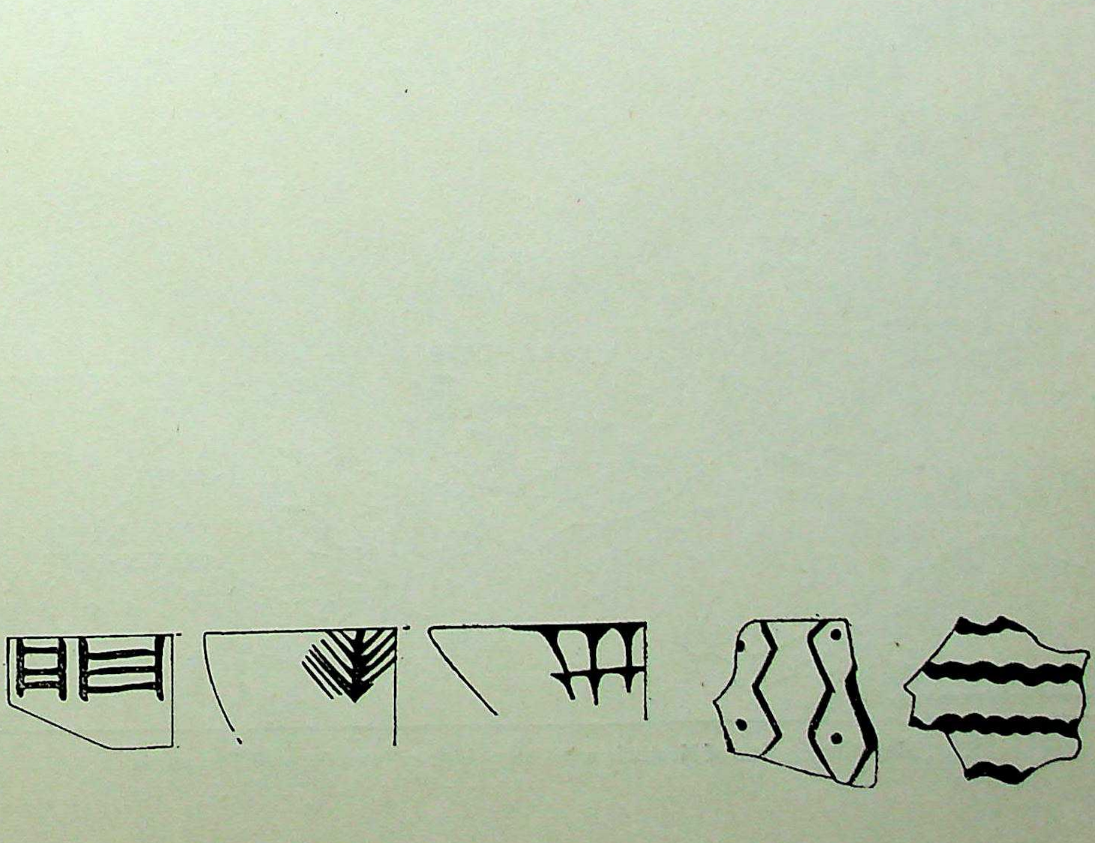
EPILOGUE

S.6.1=A Namazga III pot-sherd, p. 287
S.6.2=Pebble tool, etc., p. 287
S.6.3=Lower and Middle Palaeolithic sites, p. 288
S.6.3a=Dynamics of Harappan movement, p. 289

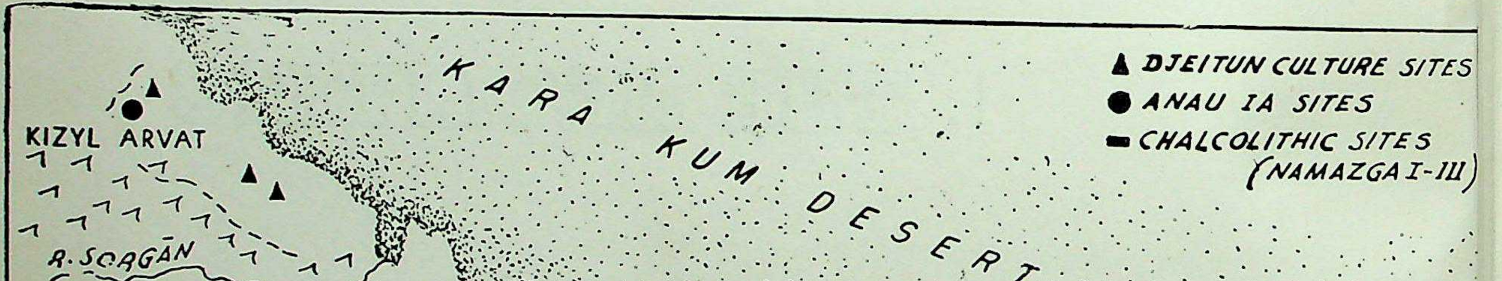


# 1. THE NEOLITHIC

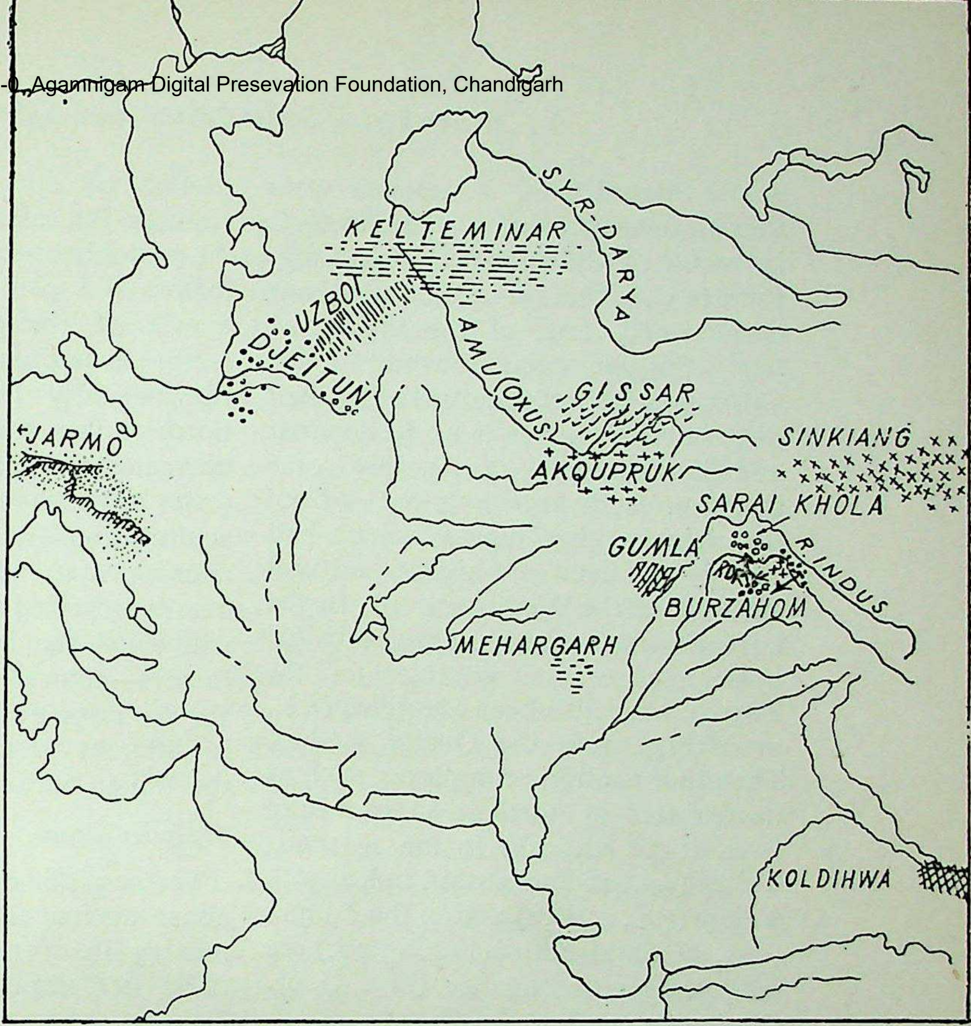
S.1.1
S.1.2



S.1.1=Terracotta head from Djeitun Neolithic
S.1.2=Pottery from Djeitun Culture


▲ DJEITUN CULTURE SITES
● ANAU IA SITES
▬ CHALCOLITHIC SITES (NAMAZGA I-III)
KARA KUM DESERT
KIZYL ARVAT
R. SORGĀN
KOPET-DAG MTS.
DJEITUN
ANAU
R. ATREK
KARA-DEPE
GEOKSYUR
R. TEDJEN
ULUG-DEPE
ALTIN-DEPE
R. ATREK
IRAN
R. GORGĀN
R. JOVEIN
R. KESHEFROOD
R. MURGAB
0 50 100 150 KMS.
MANI

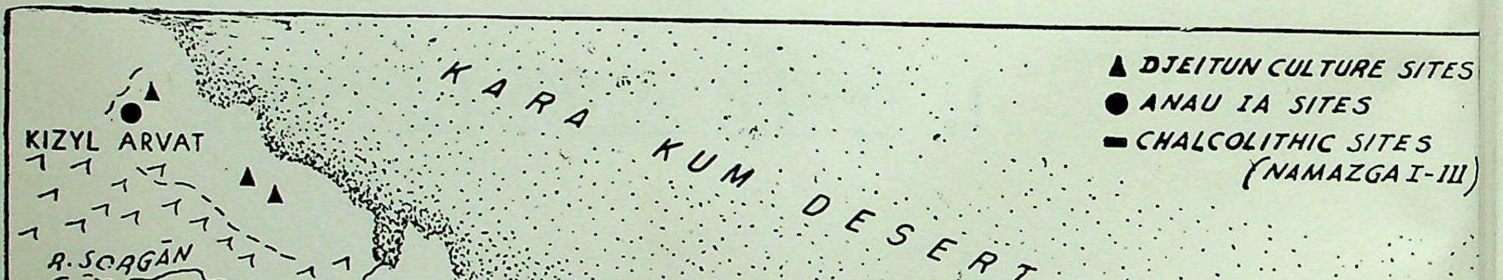
S.1.3. Map showing sites of Neolithic and Chalcolithic cultures in south Turkmenia



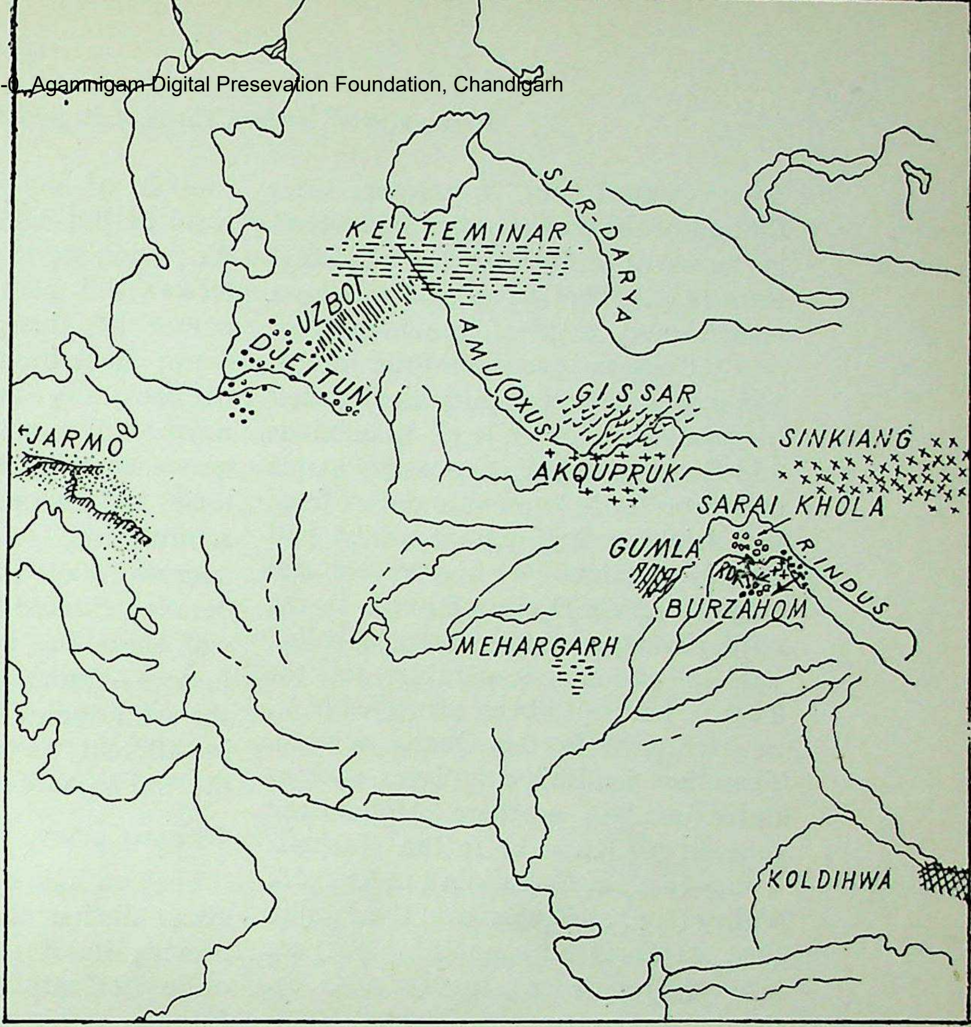
**Map showing different Neolithic Cultures**

THE CULTURAL dynamics which brought about a marked socio-economic change, and is termed as 'Neolithic' is possibly the most imperfectly known phenomenon in the history of mankind. The concept, the criteria, the nature of evidence, all have been changing during the last three to four decades, from Childe to Braidwood and Mellart (Ucko and Tringham, 1972). Still, all these mental exercise took into account only selected areas and selected evidence; mainly in and from the Fertile Crescent and the regions bordering it. The culture-complexes from other areas have generally been termed 'secondary', and, by and large, a diffusionary model is invoked to understand their origin, although not always successfully. Soviet Central Asia and the Indian borderlands present a very difficult situation indeed since these areas have generally been included in the Secondary Zone. As will be shown below, the Neolithic, in the sense of sedentary life-pattern had different forms in different ecological zones, some possibly going back in time as early as VII-VI millennia B.C. (there are many neolithic sites in the Zagros) and some as late as III-II millennia B.C. (Singh 1974). From even a casual study of the Neolithie cultures of

S.1.1=Terracotta head from Djeitun Neolithic
S.1.2=Pottery from Djeitun Culture


▲ DJEITUN CULTURE SITES
● ANAU IA SITES
▬ CHALCOLITHIC SITES (NAMAZGA I-III)
KARA KUM DESERT
KIZYL ARVAT
R. SORGĀN
KOPET-DAG MTS.
R. ATREK
DJEITUN
ANAU
KARA-DEPE
GEOKSYUR
R. TEDJEN
ULUG-DEPE
ALTIN-DEPE
R. MURGAB
IRAN
R. GORGĀN
R. JOVEIN
R. KESHEFROOD
0
50
100
150
KMS.
MANI

S.1.3. Map showing sites of Neolithic and Chalcolithic cultures in south Turkmenia



**Map showing different Neolithic Cultures**

THE CULTURAL dynamics which brought about a marked socio-economic change, and is termed as 'Neolithic' is possibly the most imperfectly known phenomenon in the history of mankind. The concept, the criteria, the nature of evidence, all have been changing during the last three to four decades, from Childe to Braidwood and Mellart (Ucko and Tringham, 1972). Still, all these mental exercise took into account only selected areas and selected evidence; mainly in and from the Fertile Crescent and the regions bordering it. The culture-complexes from other areas have generally been termed 'secondary', and, by and large, a diffusionary model is invoked to understand their origin, although not always successfully. Soviet Central Asia and the Indian borderlands present a very difficult situation indeed since these areas have generally been included in the Secondary Zone. As will be shown below, the Neolithic, in the sense of sedentary life-pattern had different forms in different ecological zones, some possibly going back in time as early as VII-VI millennia B.C. (there are many neolithic sites in the Zagros) and some as late as III-II millennia B.C. (Singh 1974). From even a casual study of the Neolithic cultures of

Soviet Central Asia, it becomes clear that all of them cannot be understood in terms of diffusion. Undoubtedly, some (*e.g.*, Uzboi group) show only a transformed stage of the Mesolithic (*e.g.*, Caspian group) while others either grew independently due to their own internal forces (*e.g.*, Kelteminar and Gissar groups), or possibly some still imperfectly known 'impulses from the neighbouring regions which had already attained a higher cultural stage' (*e.g.*, the Djeitun group). In the borderlands, recently some so-called nuclear zones, comparable to the Zagros, have also been identified (*e.g.*, at Mehrgarh in the Quetta region). The other neolithic complexes, such as those found in northern Afghanistan (*e.g.*, at Aq Kupruk), in the Kashmir Valley (*e.g.*, at Burzahom), in Kangara Valley (*e.g.*, at Ror) and in the Punjab (*e.g.*, at Sarai Khola and Jalilpur) are still enigmatic to us (Fig. G. 3). Obviously, under the blanket term 'Neolithic' we will be dealing with a variety of culture-complexes. It is hardly scientific but we wish we could really do better.

The variety that is observable in the cultural milieu is both vertical and horizontal, *i.e.*, both chronological and spatial. Thus, the Early Djeitun culture did not remain the same through the late Djeitun but the Late Djeitun Culture of south Turkmenia differed qualitatively from its contemporary Kelteminar Culture in Khorezm. Ecological and hydrological reasons are often cited for these differences, although they alone do not explain the entire situation either here or in Western Asia. Nevertheless, it may not be a mere coincidence that in this part of the world only south Turkmenia witnessed a rapid change in the growth of not only the neolithic cultures but all the later cultures of the protohistoric period. Geographical factors did play a vital role in the nature of change, although human factors have been equally important—the proximity of south Turkmenia with northern Iran must have facilitated the movement of people across the territories and exchange of ideas leading to aculturation in a more significant manner than in other areas. The details presented in the following pages will show the interplay of both the factors—natural as well as human—in the evolution of the neolithic cultures in different parts of Central Asia and the Indian borderlands.

### Djeitun Culture

The neolithic culture which brought about distinct change in the sluggishly moving life of the Mesolithic people of Soviet Central Asia is called Djeitun Culture, after the name of a site located about 36 km. from Ashkhabad, the capital town of Turkmenia (Fig. 1.1). The credit for its discovery goes to A.A. Marushchenko, an outstanding explorer, who has been responsible for the discovery of many ancient sites in

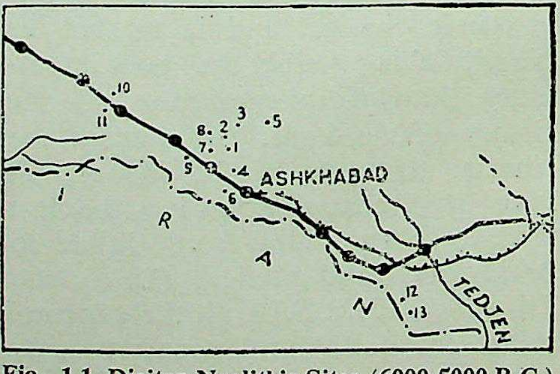


**Fig. 1.1. Djeitun Neolithic Sites (6000-5000 B.C.) (1) Bami (2) Nauza-Depe (3) Djeitun-Depe (4) Chopan-Depe (5) Toglok-Depe (6) Novoja Nisa (7) Keliata (8) Kautar (9) Kepele (10) Jarty Gumbez (11) Severni-Gevek-Depe (12) Chagalli-Depe (13) Mondukly-Depe.**

Turkmenistan, but the credit for finding out its depth, width and importance goes to V.M. Masson, a distinguished name in Soviet archaeology. The site actually lies on the top of a low sandy hill on the southern edge of the Kara Kum desert, where the deltaic fans of a big mountain river can easily be seen.

The revolutionary aspect of the Djeitun culture lies in the method through which production economy was mopped up. It involved the problems of agriculture in a landscape which has never been conducive to cultivation. It was, after all, not located in the fertile valley of any perennial river, although, as said earlier, near it there has been the delta of a large mountain stream. The only helpful point was the loessic formation, starting along the slopes of the Kopet-Dag chain of hills and coming down to the edge of the Kara Kum desert, which had the potentiality of a high yield, provided it was watered at least two times a year. The annual precipitation does not appear to have been very high in comparison with the present day rain-fall, which is only about 285 mm annually, although it may have been slightly more than this. For the first time, it appears, some primitive form of irrigation, such as spring and summer flooding, was introduced. It is suspected that at one stage some form of primitive canal was also made. Eventually, these methods, through trial and error, gave birth to regular canal irrigation in the chalcolithic period in areas like the Tedjen delta.

It also involved the problem of domestication of animals and cereals, albeit on a very small scale. A recent survey shows the existence of at least 48 species of wild cereals and a dozen or so species of domesticable wild species of animals. The Djeitun people tackled these problems in a manner whose early stages are still shrouded in mystery but whose later efforts are very well documented in archaeological records, so admirably brought out and meticulously read by an extremely devoted team of archaeologists of multi-disciplinary school.

To begin with, the Djeitun was also a primitive culture with economy based largely on hunting and gathering. Thus, it was only slightly ahead of its time. In all probability it started in the sixth millennium B.C. when some of the north Iraqi (Jarmo, upper levels) sites were more or less on the same stage of cultural development. The culture as a whole has been divided into three developing phases worked out by Masson and Sarianidi (1972) on the basis of correlation of sites in an ordered scheme which is shown in Table 1.1.

In other words, we can say that the earliest phase *i.e.*, Phase I of Djeitun Culture, is represented by the total assemblage of Djeitun-Depe; Phase II is represented by the upper layers of Chopan-Depe and some other sites; and Phase III is represented by the upper layers of Chagalli-Depe. Further, that since Phase III has been dated to 5000 B.C. by $^{14}C$ method, it is probable that the date of Phase I goes back to 6000 B.C. The probability is also based on some other comparative materials. The material culture belongs to a stage which appears to fall, according to Tosi, between Jarmo (6750 B.C. : Braidwood's general date) and Tell-Es-Sawwan (5506 B.C. ± 73 earliest levels). It may also be mentioned that the Belt Cave Neolithic has been dated to 6135 ± 150 B.C.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

**Table 1.1**

| | DJEITUN CULTURAL PHASE | | SITES AND CULTURAL LEVELS | |
|---|---|---|---|---|
| | III | | | Upper levels of Chagalli Depe (5050 ±110 B.C.) |
| Comparable with the material from Sialk I | II | | Upper Layers of Chopan, Toglok, Bami, Novaya Nisa Passedjik Depe<br>4940 ± 100 B. C. 5370 ± 100 B.C. Based on 5535 half-life | Lower Layers of Mondjukly Depe<br>Chagalli Depe |
| Broadly comparable with the material from the upper levels of Jarmo and Tepe-Guran and Yarim Tepe's lowest level | I | The entire deposit of Djeitun-Depe | Lower Layers of Chopan Depe Toglok Depe | |

JARMO (Iraq) Lower Level deposits of the Neolithic Facies.
JERICHO (Jordan) Lower Level deposits of the Neolithic Facies.

Tepe Guran Level U is dated to 6460 ±200 and Level H to 5810±150 B.C.; Tepe Sarab Level 5 is dated to 6006± 98 B.C. All these appear to be broadly contemporary sites with somewhat comparable level of culture, though not identical. To conclude, Phase I of Djeitun Culture is comparable with the material equipment we gather from the upper layers of Jarmo, located in the Zagros hills of Iraqi Khurdistan, Tepe Guran located in northern Iran; and lowest levels of Yarim Tepe, located in Gorgan valley, also in northern Iran. Similarly, the material equipment of Phase II is comparable with the material equipment we gather from the habitational deposit of Sialk Level I (Lowest levels), located in northern Iran. Incidentally, it also means that the material from the lowest layers of Jarmo has no parallel in south Turkmenian sites and it precedes Phase I of Djeitun-Depe. Jericho, the well-known site located on the Dead Sea in Jordan, goes back to the 7th-8th millennium B.C. This is the overall placement of the Djeitun Culture in the framework of West Asian complex. However, no generic relation between Djeitun and these sites is contemplated here; much against the detailed analysis of Masson. We will come to it later. We may now consider the archaeological records as we get them from excavations (Fig. 1.2).

### *PHASE I*

We may start with the details of Phase I of Djeitun Culture. We begin with the site of Djeitun-Depe since no other site represents this phase so well. Broadly speaking, it is characterized by geometric microliths, polished stone axes, bone tools, terracotta human and animal figurines, handmade plain and painted pottery and one-roomed houses made of cylindrical mud-bricks.

*Houses* : The establishment of the Djeitun village in an open fertile region with the houses built of the desired dimensions freed the people from the limitations that the natural caves or light huts in the open may have imposed in the preceding ages. Now the mud-bricks, about 60 to 70 cm. long and 10 to 25 cm. in diameter, could build fairly cool and durable houses anywhere it was thought advantageous from the point of view of the agricultural fields and the availability of water. The largest number of houses, located in level II, count as many as thirty. It is significant to note that these mud-brick houses were plastered from inside with mud. In certain cases the walls were painted

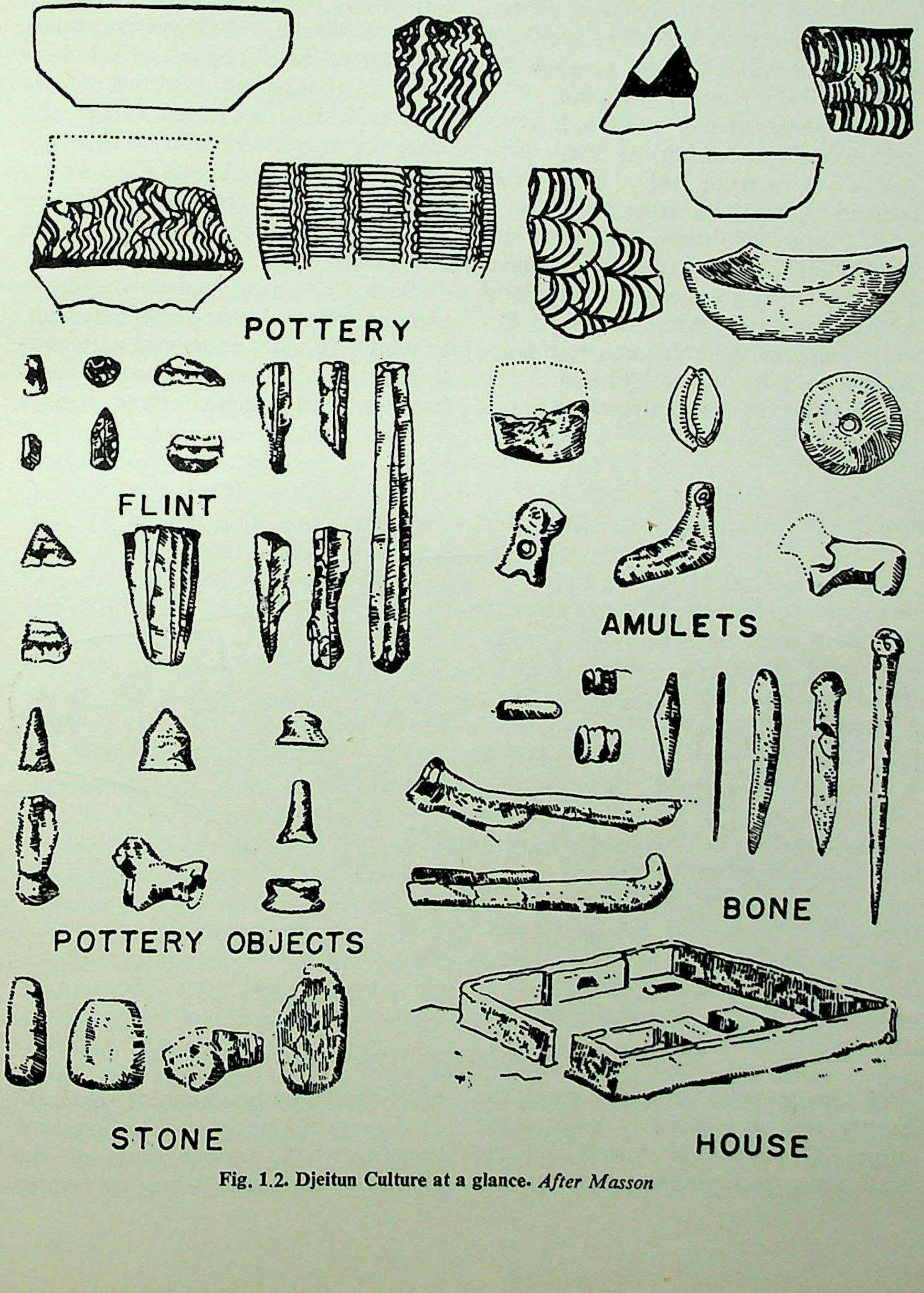

POTTERY
FLINT
AMULETS
BONE
POTTERY OBJECTS
STONE
HOUSE

**Fig. 1.2. Djeitun Culture at a glance.** *After Masson*

with red ochre. The floors, on the other hand, were either plastered with lime, some 1 to 1.5 cm. thick, or just beaten hard with a thin layer of ash on the top. The individual rooms, or houses for that matter, since these were single room houses, were rectangular or near square in plan. The hearth, large and U shaped, is generally found on the right of the entrance as one steps in; only rarely it was located along the northern or eastern wall. Some of these hearths had small platforms in front of the opening, obviously for keeping fuel-wood or glowing charcoal to bake bread directly on them as is customary in many Asian countries, including India. A low wall divided the area between the hearth and the doorway into two parts, the empty one was possibly used as the store. Opposite the hearth, on the wall, was a rectangular projection and a niche painted red or black. They were possibly used for keeping the lamps. It is significant to note that in one of the houses dug here, an underground bin, round and well-plastered, was found. This was the standard plan followed by all the house-builders of Djeitun. In the second structural level, as noted earlier, the village contained 30 houses of this type whose area varied between 13 sq. m. and 39 sq. m. 'large enough for one nuclear family,' consisting of 4 to 6 members.

Such a one-room house was, however, not always a one-room tenement, as such. It had a courtyard with out-houses in it. These courtyards, varying in dimensions, were more often shared by two houses (Fig. 1.3).

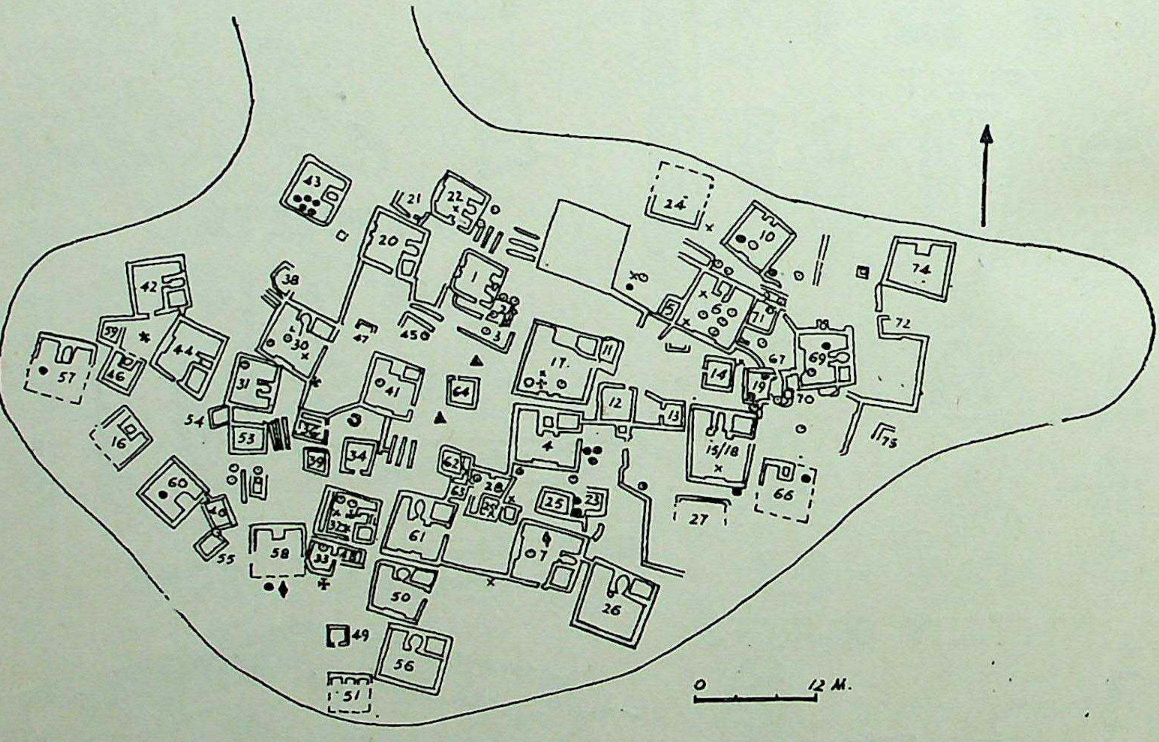


Fig. 1.3. Houses in the Djeitun Village. *After Masson*

*Granary:* The excavator made a suggestion : "In various parts of the village, structures were excavated which most likely represent the foundations of platforms for grain storage. They consist of two rather equal parallel walls, high enough from the ground to ensure aeration of the grain." It is, however, extremely doubtful if this village of thirty houses produced grain in a quantity which needed not one but several granaries. Technically also, it would stand by the side of the Harappan and Roman granaries which is most unlikely. These structures are, at the moment, enigmatic.

*Pottery :* Djeitun culture is known for its most characteristic pottery—a pale-red and coarse gritty textured handmade pottery of thick walls. Some 12 per cent of it was painted, using red pigment. The designs include groups of wavy lines and bracket-like lines delineated vertically, parallel running horizontal lines, ladder design and solid triangles arranged in a row, the latter design is extremely rare, of course. The pottery types include a variety of bowls with flat bases but different profiles—rounded, straight-and-carinated and globular but with incurved sides. The rim has always been plain.

*Tools :* The implements of this culture include 5,490 geometric microliths made on flint blades—an item which probably connects the culture generically with the Caspian Mesolithic, although it will remain a moot point till an earlier stage of the Djeitun Culture is found. The main type is trapeze, although triangles and crescents are not wanting. But probably the most important tool-type from the point of view of the Djeitun agriculturists was sickle-blade which formed 37 per cent of the total collection of stone-tool assemblage. Some of the sickle-blades were trepezoid others were only thin blades with unretouched edges and, therefore, sharp though delicate. That they were really sickle blades, has been proved by the remarkable discovery of straight bone-handles with narrow-slits for the insertion of the blades. Along with these bone-handles, the excavators discovered tools (made of shoulder blades of animals) used, in all probability, for skin-dressing. Mrs. G.F. Korobkova (1970), who carried out a number of scientific examinations on the use-marks left on the tools in the Leningrad laboratory of Prof. S.A. Semenov is of the opinion that many of the side-scrapers, points, etc., were also used for the purposes of skin-dressing. The present author also examined them in the same laboratory and he fully supports this view.

Polished stone-axes also occur although in small numbers and in sizes comparatively smaller than usually found in other places. These are usually of axe-adze type. Besides these, the site has yielded sandstone pestles and mortars, for grinding red ochre, and also querns. Further, there are some flat discs of rather irregular forms. At Chopan-Depe, in the comparable levels, a stone chisel also has been reported.

*Figurines and Ornaments :* Numerous stone and baked-clay objects are found to show that conical counters, somewhat like the pawns of chess, were invented by them. Traces of wear, when examined by Semenov and Korobkova, clearly showed the manner in which they were used. They also made beads of turquoise and other stones, bone and sea-shells. The presence of turquoise and sea-shells vouch for extra-territorial contacts. Pendants of stone in the form of animal figurines

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

have also been discovered. Besides, there is a large number of clay figurines—human as well as animal. Goats and other bovides are well represented in these figurines. It is significant to find some human figures modelled in the flat and stylized manner. Similarly, some animal figurines have been found with holes made with the help of sharp sticks—perhaps these kinds of human and animal figurines were used in magical rites.

### *PHASE II*

The site of Djeitun-Depe was, however, soon deserted and the people moved to other places nearby. It is possible that the agricultural potentiality of the land was exhausted. In any case, when we see the material equipment from the upper layers of Bami, Novaya Nisa, Chopan-Depe, etc., we find clear traces of change and development. For example, at Pessedjik-Depe, besides several average sized one-room houses, there was a large room, about 64 sq. m. in total area. Its floor was plastered with lime. It is significant to note that the domestic artefacts recovered from this room are comparatively small in number. This would indicate that it may not have been the house of a single family but a hall for common gathering, either to discuss the problems of ploughing and hunting or practise some kind of magico-religious rituals. But this is an exception.

The cultural development of Phase II of Djeitun Culture also lies in the diversification of structural activities. Now, stone was also used in building the houses, although only where it was readily available. At Bami, for example, a site located very near the hills, we have walls of stone blocks.

*Pottery :* In the field of pottery, two things happened. First, the forms multiplied; besides the bowls of the early type, we have now small to medium sized *loṭā* type small globular pots, and also forms comparable to beakers used in the scientific laboratories. Secondly, although, on the one hand, the percentage of painted pots decreased from 12 to 3, yet, on the other, the number of painted designs increased. The wavy lines and bracket-line patterns of Phase I rarely occur—there are now net-like designs, dotted patterns, continuous loops, opposed triangles, etc. Solid triangles were now more commonly used than earlier. However, sometimes the painted designs were executed very haphazardly—irregular vertical lines merging here and there; strokes, both vertical and horizontal, were not of uniform lengths, and linear patterns arranged in unequal panels.

*Tools :* In the sphere of tools, it may be noted, not only the percentage of microliths decreased considerably but the size and weight as well as the overall quality of sickle-blades increased markedly. Along with these, denticulated blades also appeared in larger numbers. All this implies the kind of directional changes in which agricultural pursuits predominated, a step ahead of Djeitun-Depe. Bone reapers with stone blades have been found fully intact.

It has also been observed that during this period scraping tools decreased considerably. This has been attributed to the development of weaving techniques. Bone needles and awls were now numerous. However, splindle whorls have not been reported.

Polished stone-axes were now elongated. In a chisel-like polished tool there was distinct chamfering on the ventral side. The axes were both with round butts and rectangular butt, i.e., some were triangular types, some were rectangular. Pounders, mortar, etc., continued to be the same as in the earlier period. Similarly, terracotta conical gamesmen and animal figurines continue to be made but in a rather restricted quantity when compared with Djeitun-Depe.

### *PHASE III*

With this we reach the third and final phase of the Djeitun Culture. As said in the beginning, about this phase of cultural development our knowledge is very limited, based exclusively on the material from the top layers of Chagalli-Depe, levels 15 to 18. However, these layers embody the history of about a thousand years.

*Houses :* The site of Chagalli-Depe (Berdyiev 1966) was small, consisting of about 12 to 14 houses. The novel feature of these houses lies in the stone door-sockets indicating the use of hinged doors. It was a definite improvement in domestic architecture—Phase I houses were probably closed with a shifting screen of mat. In pottery, although not many new shapes appeared, yet in painted designs several new motifs and patterns emerged. Plant motif appeared for the first time and so also parallel zig-zag lines and criss-cross pattern. Vertical wavy lines, rows of hooks, groups of straight vertical lines and rows of solid triangles go into the repertoire of the decorative elements. But these were now more dissected and diminutive. Some of the pots were now painted from inside also.

*Tools :* The artifacts included bone points, needles, sickle-handles, etc., as in the earlier phases. The sickle-blades, it is significant to note, accounted for 31 per cent of the total assemblage of the artefacts. They also include now larger quantity of denticulate type. The polished stone-axes were now short in size and made on irregular pieces of stone. In fact, in several examples, only the cutting-edge was polished and finished, the rest was left unworked. There are several querns and pestles with concave surfaces indicating quite clearly that they were used in grinding corn.

*Figurines and Ornaments :* Clay animal figurines and triangular gamesmen are also there but decidedly in smaller quantity. Now beads, short barrel-shaped and, long and cylindrical, are also found.

*Copper :* It is significant to note that even the use of copper has been attested through small bits.

## **Economy**

With these few important details of the antiquities found in three different phases of the Djeitun Culture (Fig. 1.4), we may proceed with a few aspects of the pastoral-*cum*-agricultural economy of the Djeitun people.

*Agriculture :* At Djeitun-Depe and other sites of Phase I, impressions of stalks and grains as well as the grains of domesticated plants have been found. At Chagalli-Depe, i.e., in the latest phase (III) of the culture, grains of two-row barley (*Hordeum disticum*) and two-row wheat (*Triticum compactcum*) have been located, which are well-known cultivated types of the Orient.

But how the field was ploughed, we

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

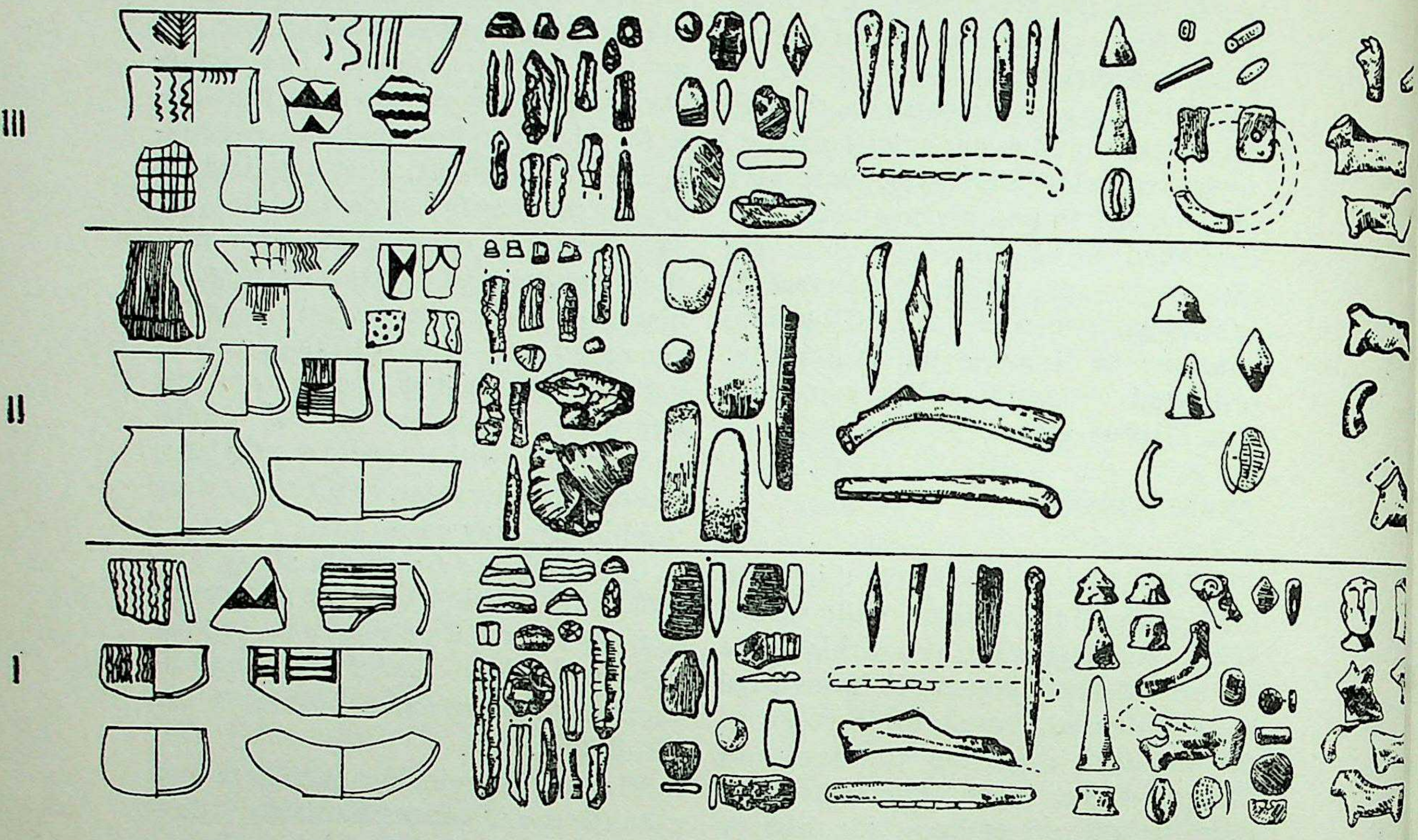


Fig. 1.4. Three Phases of Djeitun Culture. *After Masson*

do not exactly know. Mattocks have not been found at these sites. It is, therefore, likely that only digging-sticks were used. At a later stage ring-stones are likely to have been used as weights for digging-sticks since there is evidence of this kind in the fragmentary ring-stones. Masson and Sarianidi (1972) have worked out in details the population (150-180 heads) of the village Djeitun-Depe, area required here for cultivation to feed the people year long (87.5 acres), the total amount of grains required (50 tons), etc., to show the occupational pattern of the people as far as agricultural pursuits are concerned and to emphasize that agriculture had colossal effect on the economy of the people. He takes the clue from present day northern Iraq "with its backward fragmented cultivation system. The working of 15 acres would require 250 man-days of labour. Taking this norm as a basis, 1000 man-days of labour would be sufficient to work 37½ acres. If lower efficiency of agricultural implements is taken into account, this figure could be raised to 3000 man-days. And even then, two adults from each family in Neolithic Djeitun would take about two months to cope with the job. It has been proved by experiment that with a stone-edged sickle an unskilled person can collect 1.5 kg. of grain an hour. Thus, working 10 hours a day, Neolithic farmers could have collected 50 tons of grain for 1600 man-hours of labour. In other words, three workers from each family could have completed the reaping in 17-18 days" (Masson and Sarianidi, 1972).

*Stock breeding :* The above details do not mean that agriculture was the only mainstay of the economy, stock-breeding played an equally important role. In Phase I both sheep and goat were domesticated. By Phase III at Chagalli-Depe even cattle were domesticated. Dog was, of course, present from the early times.

*Hunting :* Hunting was, however, never given up. In Phase I itself, at Djeitun-Depe, we have the bones of wild gazelle, onager, wild pig, sheep, fox, cat and wolf in quantities which clearly show that hunting was still a major source of food collection; agriculture came next. But hunting was not done with bone and stone arrowheads and spearheads since such tools have not been found. Obviously, various types of geometric microliths and sling stones may have been used for this purpose. Through Phases II and III the dependence on hunting gradually decreased and the number of domesticated goats and sheep increased.

### Social Structure

By plotting the find-spots of each type of tool and earthen vessels, Masson and Sarianidi (1972, 45-46) argue that the social life of the people was decentralized. "Each family was engaged separately in the manufacture of tools, in the processing of skins, in wood-working and preparing food (large vessels are totally absent). Most of the tools have been found in the court-yards, showing that this was the main working area. The Djeitun community was an amalgamation of nuclear families. Unlike Anatolia, with its large centres, such as Catal Huyuk, neolithic Turkmenia was a country of small and poor villages." This, however, does not appear to be wholly true, although broadly correct. Those who are familiar with small-village life in the Orient, will like to invoke the following model for a better understanding of the social life.

Nuclear families formed the social unit but not the economic unit. The concept of family ownership of land is not likely to have existed then. Further, in most of the cases two houses shared a common courtyard which may again mean pooling of labour and resources. We may have to imagine a situation in which although joint family system did not prevail yet with each generation economic compulsions kept the members of the extended family in close quarters. As a matter of fact, the thirty housed village of Djeitun-Depe covering a span of about 200-300 years will mean not more than half-a-dozen original families establishing the village. If so, kinship relationship was in effect much closer than imagined by Masson. But the distribution pattern of artefacts in relation to individual houses clearly establish the fact that there was no division of labour as such—each family was technologically equipped to carry on its own business. But it does not mean that it reflects the lack of community life. In fact, the whole village of Djeitun-Depe appears to be a single big house with thirty airy rooms but without any arrangement which may be called 'pre-planned'. It had no lanes, no roads. It must had been a small village of well-knit families at a low stage of material culture in which each family was technologically independent but economically interdependent.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

**Contacts**

Masson and Sarianidi (1972, 45-46) have worked out the connections that the Djeitun Culture is likely to have maintained with its contemporary cultures in West Asia and the Near East. They draw our attention to the practice of painting the floors and the walls both, being already in vogue in the pre-pottery neolithic context at Jericho. Stone and clay gamesmen, terracotta animal figurines, use of red ochre in various ways and small polished stone-axes existing side by side the microliths are the features which characterized several early neolithic cultures of Syro-Palestinien and Iraqo-Iranian groups. But the two authors have also been conscious of the fact that some significant differences did exist between them and the Djeitun. For example, while the sickle-handle in Djeitun is straight, it is curved in Jarmo; Djeitun has no stone bracelets comparable with the Jarmo examples; the Djeitun hearths are also different in form than those built at Jarmo. Direct contacts with Jericho and Jarmo should, therefore, be ruled out.

The Iranian site of Sialk I has, however, several parallels in the late material of Djeitun, including straight handled sickles, stone and terracotta game-counters and certain painted designs. Lowest levels of Turang Tepe in Gorgan Valley also represents the same stage, Phase II of Djeitun. In fact, the pottery from the lower levels of Yarim-Tepe, also in Gorgan valley, has several parallels in Djeitun I. The excavator feels that 'northern Iran and southern Turkmenia shared a common Djeitun Culture, which, alongside the Zagros culture, formed the Iraqo-Iranian area of early farming cultures'. But on the very face of it, it is too generalized a statement to have any real value for our studies.

## NEOLITHIC CULTURES BEYOND SOUTH TURKMENIA

*Introduction :* The change over from the Mesolithic to the Neolithic in regions beyond south Turkmenia was slow and gradual as also conservative, depending largely upon semi-nomadism. Partly, it was due to hydrological and ecological reasons and partly due to their location *vis-a-vis* the higher cultures of the Zagros-Elburz—Kopet Dagh. It became clear as far back as 1938 when the sites of Djanbas Kala in Khorezm (Amu Darya delta) were first explored with great care. More of it became clear when in 1949 Djebel cave in the Krasnovodsk region, located on the south-eastern shore of the Caspian Sea, was excavated. It was further confirmed when the Gissar region of south Tadjikistan was explored. We may now consider each one of these regions.

The neolithic, as also the Bronze Age cultures of Khorezm are closely connected with the history of the Amu Darya which is indeed extremely chequered. As late as 1025 A.D. Al' Beruni observes that in ancient times the Amu Darya flowed towards the west into the Caspian Sea and later changed its course towards the north, passing through Duldul-Atlagan, turning towards the east, following the present-day dry bed of Akcha Darya towards Sarykamysh, and finally ending in the Aral Sea. It appears to be correct since the Kara Kum desert contain numerous tracks of ancient river beds and deltas as well as of long lakes. At least three deltas of three successive periods have been clearly marked. Akcha Darya Phase, Sarykamysh Depression Phase and Aral Sea Phase. At first the water flowed partly into the Khorezm Lake and partly into the Aral Sea through the now dried up channel of the Akcha Darya. In the second phase, the water flowed into the Sarykamysh depression and on reaching a certain level moved in south-westerly direction forming the Uzboi Valley which continued to develop as it advanced towards the west following the receding Caspian Sea. The lakes in the valley gradually disappeared, and a river—sometimes encased by canyons and fast flowing, sometimes wide and slow—came into existence.

Excavations and explorations have shown (Tolstov 1960) that there were at least two Neolithic cultures in the Uzboi basin; one, called Lower Uzboi, slightly earlier than the other, called Upper Uzboi. While the Lower Uzboi Neolithic evolved out of the local Mesolithic, the Upper Uzboi Neolithic was connected with the Kelteminar Neolithic Culture of the Khorezm region. Thus, while the Lower Uzboi is dated to 6000 B.C. Upper Uzboi is dated to 3000 B.C. Later, during the period of Tazabag'yab Culture, around 2000 B.C., the Neolithic Culture gave way to the Bronze Culture. However, the sites of the latter culture are very few which may suggest that during the second millennium B.C. Uzboi was affected by the hydrological changes in the Amu Darya. For 2000 years no new settlement was established—only from the 10th century A.D. the old course of the Uzboi became a

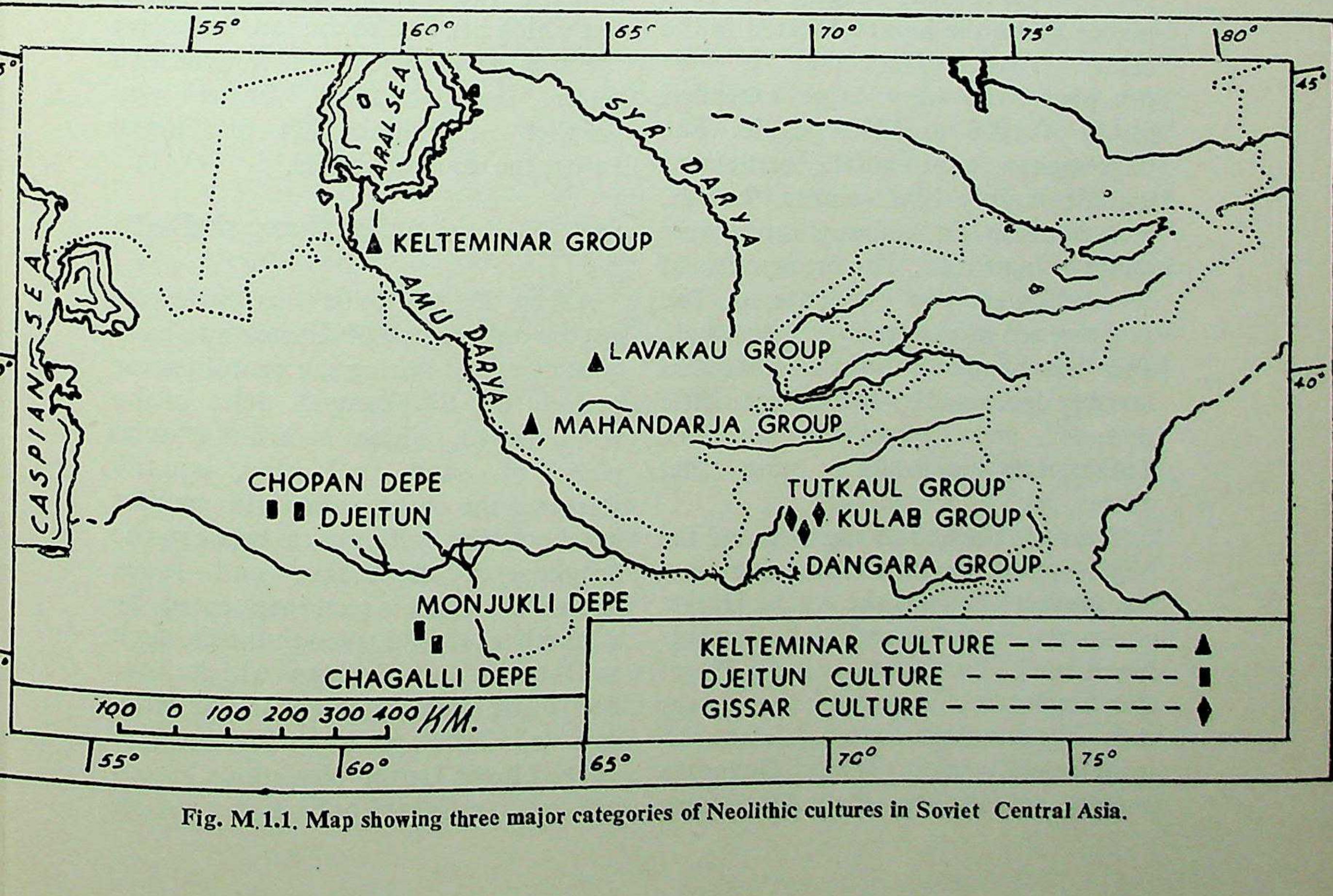

55°
60°
65°
70°
75°
80°
45°
40°
ARAL SEA
SYR DARYA
AMU DARYA
CASPIAN SEA
KELTEMINAR GROUP
LAVAKAU GROUP
MAHANDARJA GROUP
CHOPAN DEPE
DJEITUN
TUTKAUL GROUP
KULAB GROUP
DANGARA GROUP
MONJUKLI DEPE
CHAGALLI DEPE
KELTEMINAR CULTURE ▲
DJEITUN CULTURE ■
GISSAR CULTURE ◆
100 0 100 200 300 400 KM.

Fig. M.1.1. Map showing three major categories of Neolithic cultures in Soviet Central Asia.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

trade-route between Turkmenia and Khorezm.

## Akcha Darya Delta

The Khorezmian Neolithic Culture of the 3rd millennium B.C., known as Kelteminar Culture (Fig. M.1.1) is best represented at Djanbas Kala-4, located in the southern delta of the Akcha Darya. The delta lies to the right of the Amu Darya, from the north-east of the town of Turtkul to the shores of the Aral Sea, across the Kyzyl Kum desert.

At Djanbas Kala-4 Tolstov discovered the remains of a fairly big dwelling built of timber and reeds which was destroyed by a fire and then submerged in a flood. The dwelling was egg-shaped, measuring 26×17 m. Its roof was conical, roughly 8 to 10 m higher above the hearth located in the centre. Tolstov feels that it was occupied by a very large extended family of 1000 to 1200 people. The implements found at the settlement include mainly blade-points, knives, etc., made on flint, although some were made of bone also. The ornaments of sea-shells were also encountered. The pottery, red as also yellow, was crude and handmade although somewhat lavishly decorated by incised geometric designs and punctured patterns. This pottery was found at many other places, such as Kunyak-1.

Towards the end of the 3rd and the beginning of the 2nd millennium B.C. the southern delta of the Akcha Darya, which was once the seat of Kelteminar Neolithic Culture, became the centre of the Suyargan Culture of the Bronze Age. The situation lasted till the 1st millennium B.C. The Suyargan pottery, closest to the Andronovo pottery, was made of a mixture of clay, pebbles and crushed shells. It is significant to note that in many examples, the pots were found painted in red.

During the second half of the 2nd millennium B.C., the southern delta of the Akcha also witnessed the arrival of the Tazabag'yab Culture which, like the Suyargan Culture, also appears to have been closely related with the Andronovo Culture of northern Kazakhstan. To the Tazabag'yab Culture belongs the well-known necropolis of Kokcha-3, discovered in 1954-55.

During the early 1st millennium B.C., the Akcha basin witnessed the emergence of the Amirabad Culture with the addition of some Eastern elements. It is significant to note that now the Akcha Darya delta was drying out which proved to be an incentive for the development of a primitive system of irrigation based on parallel running canals and dams across the main channels.

## Sarykamysh Delta

Akcha Darya delta was, however, not the only region of Khorezm to have been occupied during the protohistoric period, the Sarykamysh delta of the Amu Darya, which is a flat alluvial plain of sand and clay, equally attracted the people, albeit in smaller numbers. The delta lies in between the Sarykamysh depression and lower Amu Darya and is seen intersected by a number of old river-channels, such as Daryalik and Daudan which have been quite deep and wide. In the delta, as noted earlier, we have the remains of the Upper Uzboi Neolithic Culture which is considered only a variant of the Kelteminar Culture. It is best represented at sites like Gyaur 1 and Khatyb 1 and Khatyb 2. Gyaur 1 is one of the largest settlements on the left bank of the Amu Darya. Obviously, it is not difficult to understand that the Upper Uzboi people of Turkmenia came from this region. However, the Bronze Age remains are very few and very shallow.

## Sarykamysh Depression

The depression, located some 200 km. south-east of the Aral Sea, is one of the largest depressions of Central Asia. Oval in shape, it measures 150 km. from north to south and 90 km. from west to east. South of this depression begins the Upper Uzboi corridor. Today, within this depression lie, sand dunes, salt deposits, deep cavities, flat clay plains, etc. At many places, however, the outline of the ancient shore is well marked by a ring of pebbles, stones and shells.

The neolithic settlements on the shores of the Sarykamysh as well as in the upper reaches of the Uzboi are located near the Charyshla well and the gulfs of Charyinsk, Pishke-Kuin and Orta-Kuin.

## Uzboi Basin

The Uzboi river, as noted earlier, emerged out of the southern bay of the upper quaternary Sarykamysh lake and, therefore, depended squarely on the water of the lake. The lake, it is significant to bear in mind, depended for its water on the Amu Darya. Obviously, the history of the Uzboi has been closely linked with the history of the Amu Darya—when the Amu changed its course and refused to supply water to the Sarykamysh lake, the Uzboi also straved and human settlements could not survive.

If the number of settlements is any guide to the history of the river, it may safely be observed that it was in the Neolithic period, around 3000 B.C., that the Uzboi was a perennial river, flowing from the lake to the Caspian Sea, since all along its bank we have the remains of this culture. Unfortunately, much of the regular settlements got completely obliterated during the desiccation of the banks in the first millennium B.C. and we have only the flint tools from them. However, the concentration of neolithic tool-assemblages has been so great that there were only a few examples when the explorations conducted on the river bank proved unrewarding.

It appears that during the second millennium B.C. the quantum of water in the river was reduced and the river did not attract very many Bronze Age people. Although Tazabag'yab pottery, of the 2nd half of the second millennium B.C., has been found at some places yet neither in large quantity nor at so many places.

We may now consider the details of the neolithic cultures of the Khorezm and other regions.

## The Caspian Neolithic

At Djebel, the microlithic tool-assemblage imbibed the neolithic elements by stages. The excavators at this site found several levels of occupation of which the lower ones have yielded only the microlithic tools. These tools, it is significant to note, persisted through several layers, up to those of the Neolithic, the Level 4,

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

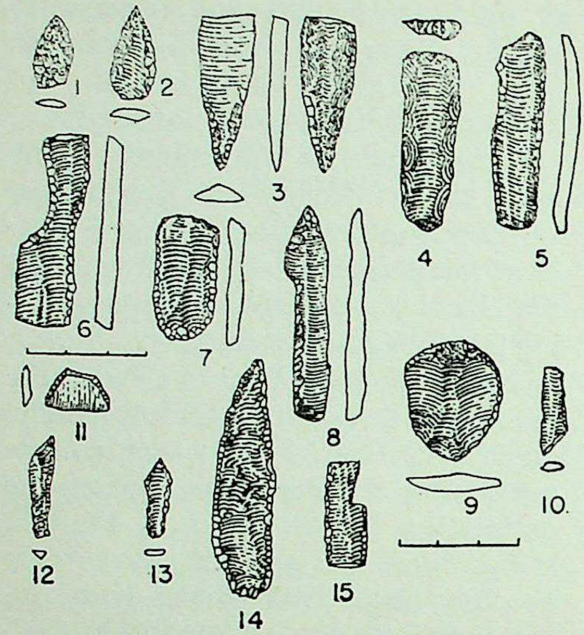


**Fig. 1.5. Flint tools from Caspian Neolithic sites of eastern south-Turkmenia: From Djebel 1—4 layer 3; 5 to 9 and 11 from layer 4. Rest are from Oyukli (Neolithic) site.**

along with notched blades and leaf shaped and hollow based (concave along one side and not exactly at the base) arrowheads (Fig. 1.5). In the neolithic level stone querns and hand-made crude pottery have been found along with the bones of fish and gazelle, an evidence which clearly shows that hunting and fishing still played the dominant role in the economy of the people. It was not the 'food-producing economy which characterized the south Turkmenian neolithic to be dealt with later. Goats may have been domesticated but that would not have brought in any major change. Interestingly enough, the ornaments used by the people of this level consisted of beads and perforated sea-shells. It may not be out of place to mention that similar beads were found inside the burials of the Neolithic period located near the Kailiu Cave. Happily, this level has a $^{14}$C date of 4070±140 B.C., which means the Neolithic Culture at the site can be dated to the end of the fifth millennium B.C.

Ever since the above discovery, many neolithic sites have come to light, immediately on the east of the Caspian Sea, particularly in the region of Kara Bogaz. Some of these sites are Khodja Su, Chagnak and Djanak. By and large, the neolithic assemblages of these sites contain the same took-kit as found at Djebel Cave—large-sized long blades, also very small blades, large trapezes and pointed scrapers. But unlike Djebel, the sites here are devoid of pottery.

In recent years, some of the sites located in the territory of the Great Balkhan Desert, such as Oyukli, Bash Keriz and Tash Arvat, have been put to excavation. Oyukli is a very important site located in the northern region of the desert; the other two, it may be noted, are situated in the southern region. Oyukli has yielded a kind of round-based vessel with incised decorations along with notched blades, pointed scrapers and backed micro-blades. But the other sites are like the Kara Bogaz sites, yielding stone tools, etc., but absolutely unassociated with pottery. The tools were, however, also distinct—they were largely made on flakes rather than on blades, and they include scrapers and burins. These sites have, however, been dated to as late as the 3rd millennium B.C. and, therefore, are comparatively late in the chronological order.

Thus, on the Caspian, from about the 5th millennium B.C. to the 3rd millennium B.C., a neolithic complex of two facies seems to have developed—one which was hardly different from the pre-existing mesolithic culture, except for some additions in the tool-kit, and the other which included, besides these additions, handmade crude pottery and stone querns. It may, however, be pointed out that within the pottery group of sites there are two sub-groups, one, which is characterized by Djebel handmade pottery (sometimes mixed with a kind of grey ware, apparently belonging to some neighbouring Iranian tribe) and the other by Oyukli round-based pottery. It is significant to note that even in their distribution, the two groups differed—the former occupied the Krasnovodsk region, while the latter occupied the northern part of the Balkhan desert. But these were only regional differences.

The Caspian Neolithic, however, witnessed only a stunted growth. It could never establish full-fledged agricultural villages. The credit for establishing the first villages with food-producing economy, as said above, goes to south Turkmenia. But before we deal with that, something must be said about another neolithic culture, the Kelteminar Culture, which covered most of the region of the Kara Kum and Kyzyl Kum deserts occupying large tracts of Kazakhstan and Uzbekistan, since in certain respects it is comparable with the Caspian Neolithic.

## The Kelteminar Culture

The Kelteminar Neolithic Culture, like the Caspian Neolithic Culture, is also devoid of true agricultural base; the economy was still dependent primarily on hunting, gathering and fishing; agriculture was secondary. Yet in contrast with the Caspian sites, the Kelteminar settlements were stable, permanent and wide-spread; for example, nothing like Djanbas Kala-4 in Lower Amu basin and Darbaz Kir near Bokhara, both in Uzbekistan, existed in the Caspian Culture-area.

The Kelteminar complex is marked by three distinct facies : (i) the Lower Amu Darya Group, also called, Akcha-Darya sites, (ii) the Lower Zeravshan Group, also called Tuzkhan sites, and (iii) the Uzboi Darya Group (the Uzboi has now completely dried up, the sites are located along the ancient bed which often disappears in the Kara Kum desert.) The geographical spread of this complex covers the deserts and the steppes both. In fact, its eastern-zone sites show traces of contacts with the Uralian and West Siberian neolithic facies. Masson and Sarianidi (1972, 73-74) have brought to our notice the similarity that exists between the sickle blades from Zeravshan sites, possibly going back to the fourth millennium B.C., and the sickle blades from the Late Djeitun sites, in south Turkmenia, which are also of almost the same period. However, it is extremely doubtful if they were generically related.

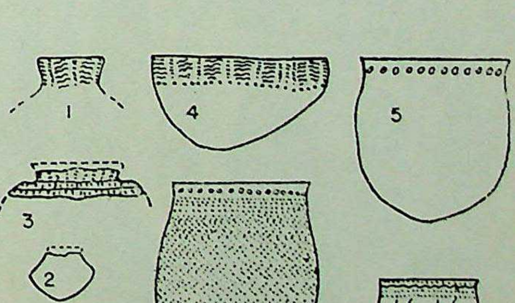


**Fig. 1.6. Incised and dot-decodrated handmade pottery of Kelteminar (Neolithic) Culture of Khorezm. Early Period.**

*Tools and Pottery :* The Kelteminar Culture has an early and a late phase. The early phase is characterized by handmade ware, richly decorated with incised, stamped and punctured designs of wavy lines, straight lines, dots, arrows, etc. The pottery includes shapes like shallow bowls with round base and deep beaker-type vessels with slightly pointed bottom (Fig. 1.6). The lithic tools of the Mesolithic types, such as trapeze, continue to exist in this phase. Arrowheads with concave base also exist along with the blades and trapezes, and also some heavy pointed tools (Fig. 1.7). The pottery of the late phase of this culture consists of practically all the forms of the early phase plus globular vessels with comparatively short neck and flat base. Although their decoration technique continues to be the same as in the early phase, yet decoration itself, in most cases, became quantitatively less; in certain cases even absent. Still, wherever decorated pottery is found, it also shows some more beautiful patterns, incised deeply with the help of stylus whose end is slightly blunted. The proportion of linear designs in the whole gamut of decorations increased considerably.

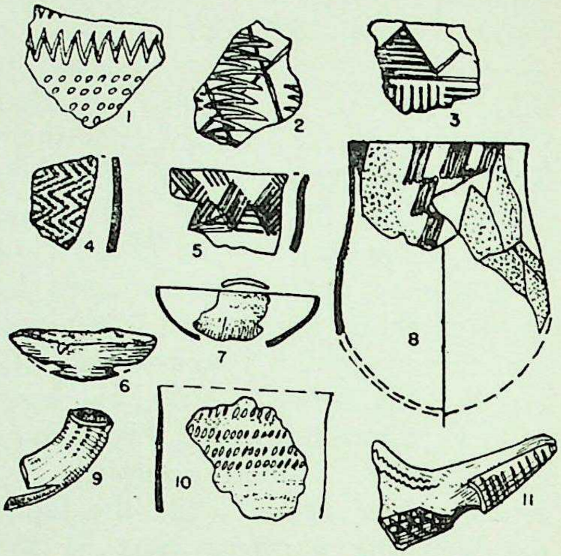


**Fig. 1.8. Incised handmade pottery of Kelteminar Culture (Neolithic) of Khorezm. Late Period.**

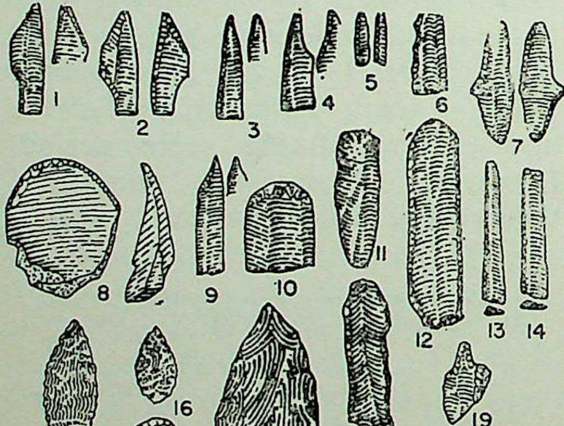


**Fig. 1.7. Flint tools from Kelteminar (Neolithic) Culture of Khorezm**

Combination of triangles with a series of vertical and horizontal lines arranged in panels now became the characteristic pattern. Liped bowls with mesh designs of logenzes, groups of four or five oblique strokes, and wavy lines also characterise the decorated surface of the pottery (Fig. 1.8.). The flint tools became very rich in variety, consisting of about 22 major types, such as single and double shouldered points, backed blades with notched ends, often retouched from the ventral side, end scrapers, thumbnail scrapers, bifacial pressure-flaked leaf points, possibly used as arrowheads, and large sized leaf-points, sometimes called spearheads. In the latest levels of this phase, use of copper has also been attested.

**Economy**

The Kelteminar culture, as a whole, is characterized by fishing implements, such as net-sinkers, composite harpoons and fish-hooks. That fishing played a major role in the economy is also proved by the actual location of most of these sites—along the small streams, creeks and lakes which abound in fish. Besides fishing, hunting was also prevalent. The big animals that they killed and ate include wild horse, roe deer, onager, red deer, boar, etc., particularly in the sites located in the lower course of the Zeravshan. The kitchen remains also include fresh-water mollusca and land mollusca.

It is significant to note that although direct evidence of agriculture is still wanting, the Zeravshan sites have yielded indirect evidence of some kind of agriculture, at least harvesting. It lies in the lithic sickle-blades as well as in querns and pounders found at these sites. It need also be mentioned that the bones of domesticated animals have been found at these sites. But in spite of some kind of agriculture and domestication of animals, and even the use of copper, these sites could not march ahead in the civilizing process. The people, in very small groups, lived only in huts, with floors dug slightly below the ground level and the super-structure made of logs of wood. The reconstruction of a very large hut like this, on the basis of evidence gathered by S.P. Tolstov at Djanbas Kala-4, shows that possibly the top was open for light.

## Gissar Culture

We may now come to the region which is nearer to India than any other part of Soviet Central Asia. It is the south-western region marked by the mountain ranges known as Hissar or Gissar. The neolithic sites of this group, located mainly in south Tadjikistan, are characterized by crudely made pebble tools, including some small sized chopper-chopping artefacts (Fig. 1.9). These tools are found

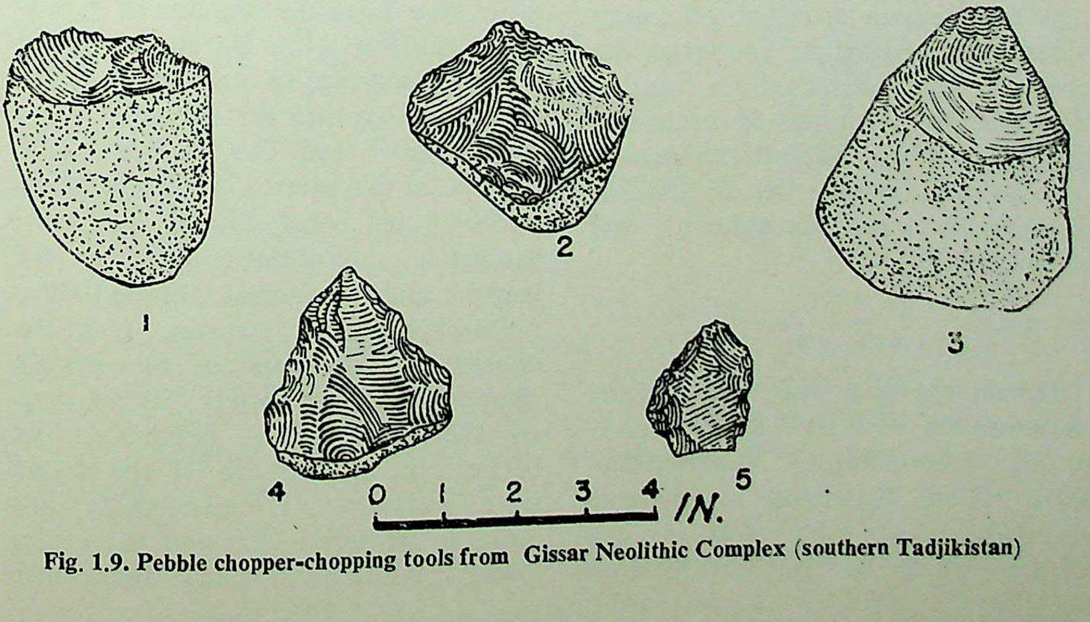


Fig. 1.9. Pebble chopper-chopping tools from Gissar Neolithic Complex (southern Tadjikistan)

4961

associated with microliths, such as trapezes and polished stone axes, and pounders (Fig. 1.10). The bone tools include points or piercers (Fig. 1.11). The pottey, found only rarely, includes hand-made coarse-textured vessels with pointed base. Some of these bear textile-impression in the latest stage of the Hissar Culture. In the same stage mortars and querns are also found. Primitive agriculture and domestication of animals have been surmised; on scanty evidence, of course. By and large, the economy was still based on hunting and collecting. Although its beginning may go back to the sixth millennium B.C., its main focus lies in the 3rd millennium B.C. (Karabkova and Ranov, 1968).

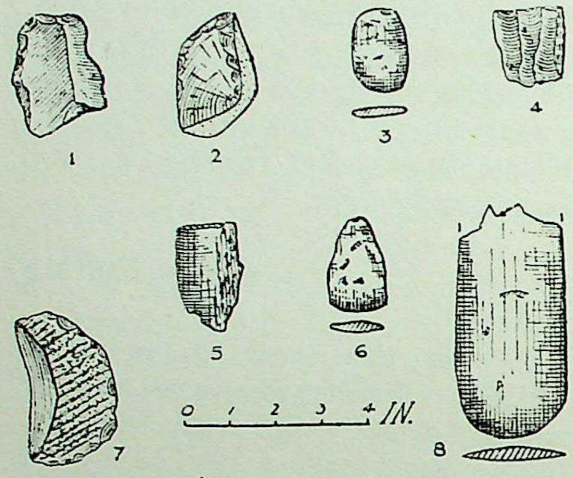


**Fig. 1.10. Neoliths from Gissar (Hissar) Culture, Tut Kaul, Tadjikistan**

## TUT-KAUL

Of all the sites of this culture known so far, such as Tut-Kaul, Ak-Tanga, Kui-Bulion, Kukhna-Bai, Seyed Hissar, Tut-Kaul is outstanding. Like many other sites of this culture which lie on flat grounds along the rivers, Tut-Kaul is located on the vast alluvial terrace of R. Vaksha. Ranov was asked to excavate it because the site was threatened by the rising water-level in the river, due to the coming up of a hydro-electric plant up-stream.

The entire deposit at the site is 7·2 m although most of it is only barren silt-deposit, repeatedly formed after the desertion of every habitation (Fig 1.12). There are four levels of occupation, although the upper-most belongs to comparatively recent times (Gupta, 1967). Thus, the lower three levels are more important here. They are separated by two thick layers of silt, as noted earlier while dealing with Mesolithic. Level III, the lowest and earliest, is purely Mesolithic with rectangular bladelets, retouched and blunted at two ends—the distal and proximal. In technology, it is nearest to trapeze. These rectangles are associated with a limited number of small sized thumb-nail scrapers. The deposit is very shallow, hardly 5 to 6 cm. thick. It does not concern us much in this chapter.

Level II, the middle one, is Neolithic. We have the remains of paved-floors (paving done by stone-pieces), some occupying an area upto 40 sq. m. Obviously, they carried over them huts made of reed. The site has a thick deposit of two metres. It is characterized by fluted cores, blades and non-geometric microliths, such as the backed and retouched blade-flakes, point-knives and lunates. It also consists of scrapers of the pebble chopper-chopping variety; 70 per cent of the tools are on pebbles while 30 per cent of them are of the fluted core technique. Usually, these are small to medium in size and, therefore, handy. While from some of them only

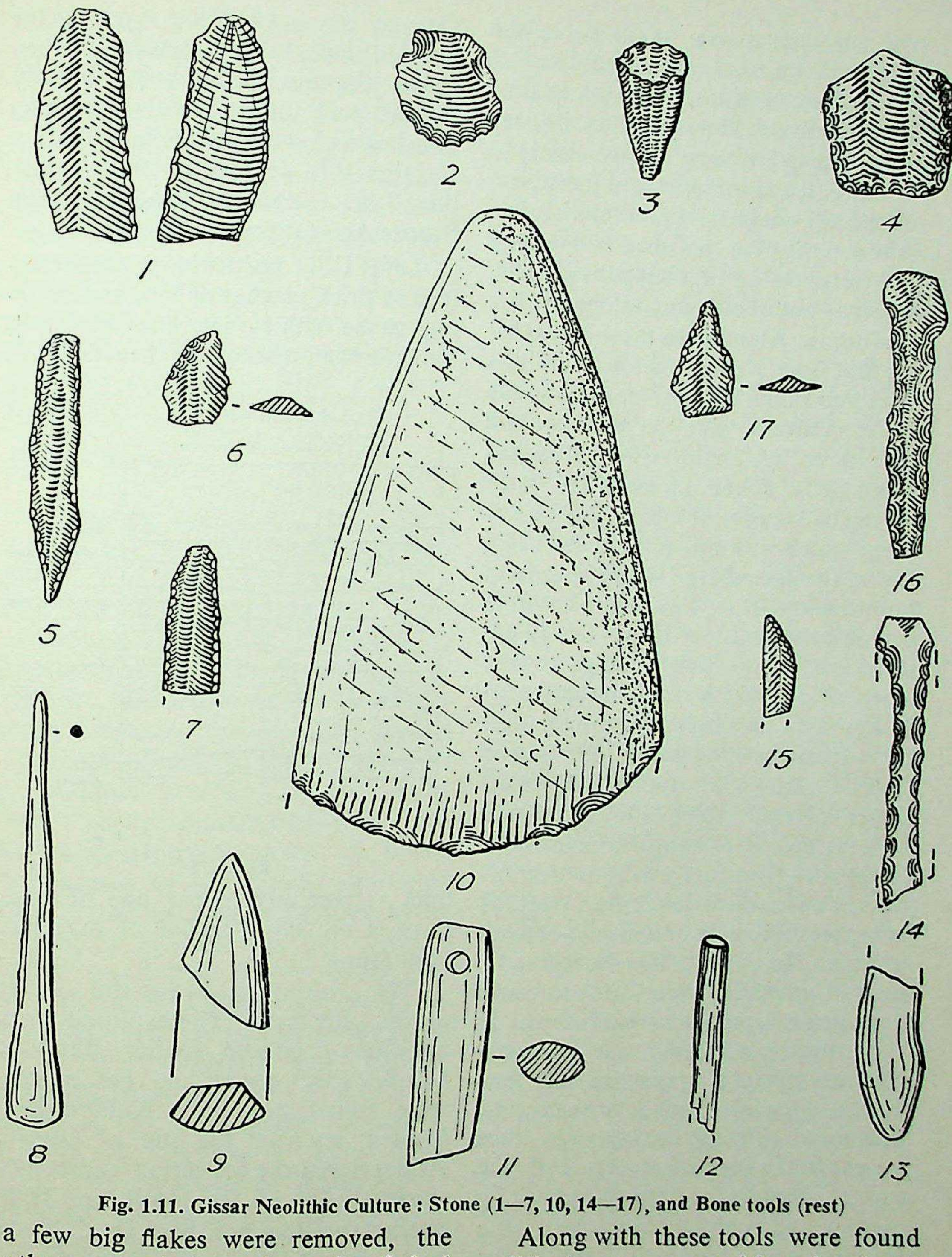


**Fig. 1.11. Gissar Neolithic Culture : Stone (1—7, 10, 14—17), and Bone tools (rest)**

a few big flakes were removed, the others are nicely and neatly flaked showing a number of small flake-scars. A few are also retouched along the cutting edge. These are made on pebbles or thick pebble-flakes.

Along with these tools were found polished stone axes with pointed and rounded butt varieties (Fig. 1.11). In section, these are usually flat (narrow, flattish; only rarely lenticular), since the materials, serpentine

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

and nephryite, are available in flat sheets. It is a feature that characterizes the Sinking neolithic axes also. In fact, nephyrite is not a local product, its nearest source is Sinkiang. (Appendix 1)

Level I, the topmost and latest, is a developed stage of Neolithic. It is a thin deposit with polished stone axes and 'scrapers' of the chopper-chopping variety—both belonging to the earlier traditions. Along with these tools, for the first time, real geometric microliths appeared in the form of trapezes in the Gissar Culture. But the trapezes are nearest to rectangles with retouched short ends, found in Level III. They belong to the overall microlithic assemblage which was also present in Level IIa in the assemblage of lunates and point-knives. It is significant to note that in between Level II and III, there is the level IIa which belongs to the Mesolithic (7th-8th millennium B.C.) It consists of backed blades and lunates. Level II has been dated by $^{14}C$ : Lower layers 8020±170 (6070±170 B.C.) Upper layers 7100±140 (5150±140 B.C.). In this level, polished axes were numerous—triangular, oval or rectangular in shape with lenticular, rectangular, plano-convex or concavo-convex section. The variety was more due to the raw material than due to any diversity in typological traditions. It is, however, noteworthy that the complete examples of axes are very few; mostly, they are found broken into thick flakes through the cleavage lines present in the layered structure of the stone. These flakes were sharpened by grinding and rubbing along one of the required sides. However, such flakes could be used as knives or scrapers very effectively. This reuse of the broken tools clearly shows that nephyrite was a rare and imported material. One of the outstanding types of the polished tools in the crescent shaped sickle—the convex back being heavily blunted and the concave edge being polished and sharpened (Fig. 1.10,7).

Over this deposit of three levels there is a shallow deposit of the Bronze Age culture.

Level II is particularly characterized by thick patches of ash, and floorings paved with stones. They probably indicate the presence of hearths and huts respectively. Near one of these huts, a crouched burial of man has been found.

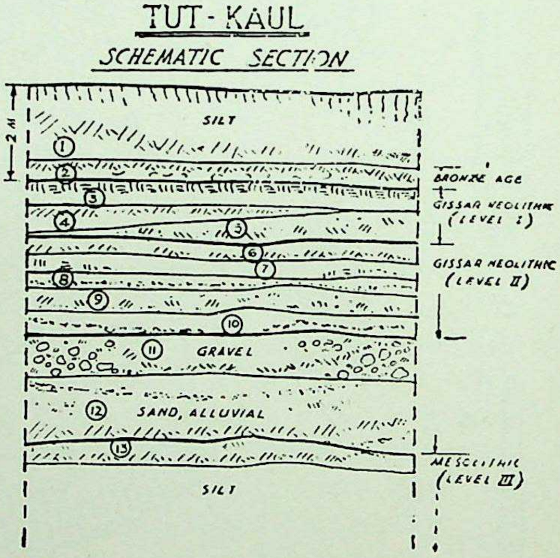


Fig. 1.12

The neolithic culture at the site is devoid of pottery. The explored sites have also produced similar material; in a few cases querns and pestles too were found, e.g., at Kukhna-Bai, located very near the site of Gissar. At Sai Seyed the collection represents the late stage of the Neolithic. It is characterised by polished axes, blade tools, microliths, bone implements, stone beads, etc. It has some elements of Early Bronze Age also. The polished axes, very few indeed, show clear marks of re-use. There is a very beautiful example of an over-all polished axe. These are made of schist, serpentine, etc. The blade tools, long, sharp and minutely retouched, are of numerous types. They include steeply retouched long drills with round cross-section. Points are numerous. The microliths include thumb-nail scrapers, crescentic points, rectangles with three sides retouched. Bone tools include long points with polished working-ends and polishers. Beads and pendants of polished stone and bone are also found (Fig. 1.11)

### General Review

Although the Gissar Neolithic Culture is rich in stone implements, so far it is found devoid of cereals and mud or mud-brick houses; pottery has doubtfully been found. On this basis Masson and Sarianidi (1972, 74) once thought that economically, it was the stage of hunting and collecting rather than food producing, the hall-mark of a developed neolithic culture. However, recent researches by Mrs. Karabkova have clearly shown that the blades bear traces of use exactly similar to those found on sickle-blades used for harvesting (Karabkova and Ranov, 1968). Apart from these, there are crescentic sickles, querns and pestles. It is, therefore, likely that in some form or the other agriculture was practised although definitive evidence is lacking. However, Ranov (personal communications) also argues in favour of agriculture on the basis of landscape in which the sites occur : on vast terraces of thick deposits of silt or loess which were conducive to cultivation. In places away from such conditions, not a single site of this culture has been found.

The excavations have also yielded a small number of bones of domesticated animals, a second characteristic feature of a neolithic culture.

The clear evidence of houses made of mud or mud-bricks has, of course, not been found, but the presence of fire-places and floorings of stones at Tut-Kaul, and of post-holes in the latest levels of Kui-Bulion does indicate that huts were regularly erected and the pattern of life was of a settled nature.

The total picture that emerges is certainly more 'neolithic' than 'mesolithic', although it was vastly different from the south Turkmenian neolithic complex of Djeitun type which alone had the potentiality to develop the chalcolithic villages.

Prof. Okladnikov, who himself explored some of these sites, feels that the Gissar material is nearer to that from Karim Shahir in the Zagros mountains. He also sees its comparison in the antiquities from Zavi Chenidar (Okladnikov 1965). But these examples are only at the level of selective comparison in the framework of evolutionary stages with trait infiltration in different directions whose mechanism is still not clear to us. It is doubtful if the two culture-groups had any generic relationship ; they are vastly separated by time and space.

In any case these comparisons may show that the Gissar (or Hissar) Culture represents one of the earliest stages of the Neolithic culture-complex in Central Asia. It may, however, again be made clear that such a comparison exists only in the cultural stage as reconstructed on the basis of tool-types. It has no chronological implication at all, since while the West Asian sites go back to *circa* 6000 B.C. to 8000 B.C. or so, on the present showing the Central Asian Gissar (or

Hissar) sites hardly go back to 4000-3000 B.C., except possibly Tut-Kaul which may go back to the seventh or eighth millennium B.C. since the middle level of this site goes back to the beginning of the sixth millennium B.C. or seventh millennium B.C. But more sites of this kind must come to light before anything definitive can be said.

## CENTRAL ASIA, AND THE INDIAN BORDERLANDS

In his classic paper on the Neolithic pattern of India, V.D. Krishnaswami (1960) grouped all the neolithic sites of north-western India into one unit, viz., Province D. Such a grouping was based more on regional considerations than on common denominations of cultural traits. The pre-pottery neolithic level of Kile Gul Mohammad in Baluchistan is characterized by tools made of chips and flakes of non-standardized shapes. The few polished stone axes from Shadipur, near Attock, Harappa and Mohenjodaro belong to the Bronze Age. The large scale excavations at Burzahom in the Kashmir Valley have yielded bone harpoons, pins, polishers, etc., along with polished stone axes, and presents a picture in which fishing and hunting played the prominent role. Now at Ror, in Kangra (Mohapatra 1966), along with the polished axes, pebble chopper-chopping tools and prepared-flake tools have been found. Gumla in the Gomal Valley, Sarai Khola near Taxila and Jalilpur near Multan, have also yielded different facies of pre-Harappan neolithic complex. It is, therefore, clear that Krishnaswami's zonal system was no better than an apology of the solution during the period of paucity of material. Not that there has occurred any significant change in that position, but new data from excavations in the Kashmir Valley and the Punjab are good pointers towards the idea that the Province 'D' of Krishnaswami actually consists of a variety of neolithic cultures, including one recently discovered at Mehrgarh, on the Bolan river in Baluchistan where a 9 m deposit of pre-pottery neolithic exists. The problems of origin and development of all of them are beyond the scope of the present work, but that of the Kangra Valley and Bolan Pass may be considered for reasons of viable comparisons.

### The Neolithic Assemblage of Ror in Kangra Region (Northern India)

On the Banganga, in the Guler region (Fig.1.13) Mohapatra has noticed seven terraces, although Lal (1956, 61-64) and others mentioned only five, including the recent one. Between the villages Ror and Dibber, on the terrace called T4, were found the neolithic tools. It is mentioned that while $T_1$, $T_2$ and $T_3$ did not yield any example of this assemblage, $T_5$ to $T_7$ were not explored. $T_4$ is slightly more than 70 metres high from the present water level. The total collection consists of thirty three 'Early Sohan type pebble-tools, and one hundred and forty one small flake implements of chert' (Fig. 1.13a). Mohapatra has not given exact number of polished axes. These axes are prepared out of a type of shale. Similar tools were also collected from Dehra Gopipur and Baroh, in the same region. The shale ring-stone is represented by only one example in the collection, and that too is fragmentary. The small flake-tools are mainly scrapers and incipient borers, and are produced out of greyish chert. The small flakes consist of a few blade-flakes and a good deal of unretouched flakes showing prepared platform. Mohapatra observes that the celts could not be produced locally since the nearest source of its raw material is Dharmashala, but that is not far off, hardly 20 km. Apart from these, the presence of a large number of side-scrapers 'made out of pebbles with almost half of the rounded pebble-cortex intact' is extremely significant, for 'some of these side-scrapers almost look like miniature Early Sohan pebble choppers' (Mohapatra 1966).

The surface collection of the tools at Ror presented such an odd variety of types which would confuse anyone not conversant with the collections made in Tadjikistan. But before we deal with that there are some internal problems of the Ror assemblage to be solved. The point at issue has been whether to accept the contemporaneity of the polished axes with chopper-chopping tools, chopper-scrapers and flake tools found on $T_4$ at Ror or not ? Further, whether the Ror collection is generically related to the Sirsa Valley assemblage, also discovered in the Mohapatra's excavated trenches on $T_3$ at Dehra Gopipur which is characterised by chopper-chopping tools and prepared-platform flakes or not ?

In order to prove the generic relationship between $T_4$ and $T_3$ assemblages Mohapatra conveniently divided the Ror collection into two segregated groups, one containing polished tools and the other with the rest of the implements. It was now easy to explain away the situation. For the former he wrote 'only further excavations can tell us whether this neolithic penetrated here from southward moving Burzahom Neolithic or northward moving Peninsular Neolithic.' Clearly enough, he confined himself within India and attributed the polished celts a place outside the total assemblage. For the latter he gave another explanation. He wrote, " . . . . one can safely accept this industry as another regional manifestation of the Sohanian pebble-tool tradition at its very late stage. . . The Late Sohan industries of the Western Punjab being mixed with an Acheulian Complex have been technically described by Sen as 'Sohan -Levallois-Acheulian'. . . In the similar fashion the industry at Ror may be defined as Sohan-Levalloisian minus the Acheulian elements" (Mohapatra 1966). It is clear, therefore, that Mohapatra considers this portion of the assemblage as palaeolithic and not neolithic. His vague lable of 'very late stage' for this portion might mean anything to him, but to a reader of his reports it is more than clear that it still falls within the Pleistocene. We are, therefore, led to believe that there is a big gap of thousands of years between the polished implements and the flake and chopper-scraper groups of the Ror assemblage—the former is neolithic and the latter palaeolithic.

Let us consider the whole problem afresh :

### *Pebble Chopper-Chopping Tools persist in the Neolithic Assemblage*

First, the change of raw meterial—from quartzite to grey chert—in the case of flake tools and chopper-scrapers is

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

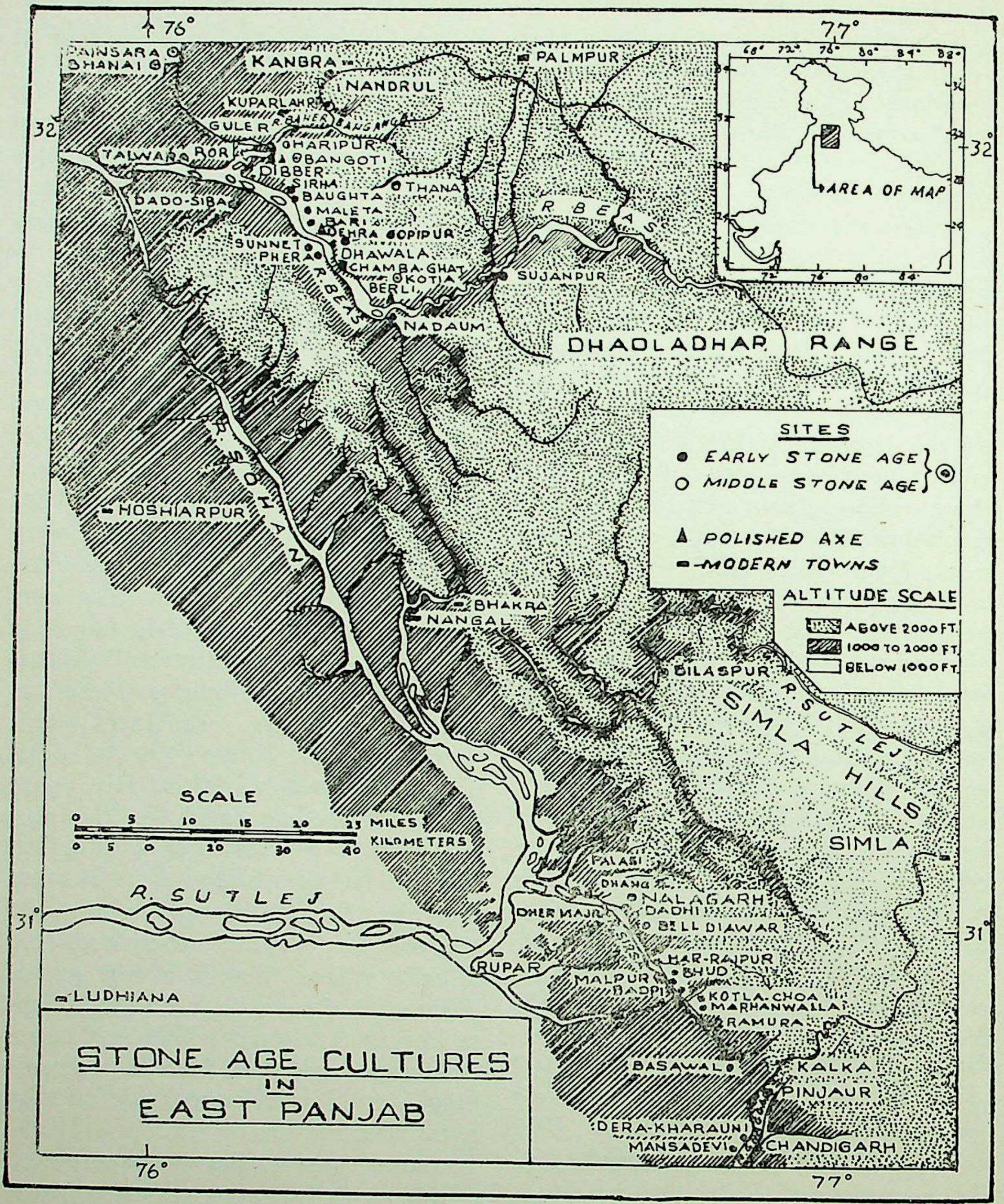

76°
77°
32°
31°
PAINSARA
BHANAI
KANBRA
NANDRUL
PALMPUR
KUPARLAHR
R. BANER
BANGANGA
GULER
HARIPUR
TALWARA
ROR
BANGOTI
DIBBER
SIRHA
THANA
DADO-SIBA
BAUGHTA
MALETA
BARI
DEHRA GOPIPUR
SUNNET
PHERA
DHAWALA
CHAMBA-GHAT
KOTIA
BERLI
R. BEAS
SUJANPUR
R. BEAS
NADAUM
DHAOLADHAR RANGE
AREA OF MAP
SITES
● EARLY STONE AGE
○ MIDDLE STONE AGE
▲ POLISHED AXE
▬ MODERN TOWNS
ALTITUDE SCALE
ABOVE 2000 FT.
1000 TO 2000 FT.
BELOW 1000 FT.
HOSHIARPUR
R. SOHAN
BHAKRA
NANGAL
BILASPUR
R. SUTLEJ
SIMLA HILLS
SIMLA
SCALE
0 5 10 15 20 25 MILES
0 5 10 20 30 40 KILOMETERS
R. SUTLEJ
PALASI
DHANG
NALAGARH
DADHI
DHER MAJRI
BELL DIAWAR
HAR-RAIPUR
BHUD
RUPAR
MALPUR
BADPI
KOTLA-CHOA
MARHANWALLA
RAMURA
LUDHIANA
STONE AGE CULTURES IN EAST PANJAB
BASAWAL
KALKA
PINJAUR
DERA-KHARAUNI
MANSADEVI
CHANDIGARH

**Fig. 1.13. See Ror like Neolithic (Polished Axe) sites in the north.** *After Sankalia*

a position similar to the change of raw material, from quartzite to jasper, agate, etc., seen in the case of Lower Palaeolithic tools and Middle Palaeolithic tools, or from jasper, etc., to basalt, etc. seen in the case of Mesolithic tools and Neolithic tools in India. In all likelihood, therefore, this change indicates not only the change in industry but also a change in period. The continuation of the use of quartzite for chopper-chopping tools, however, does

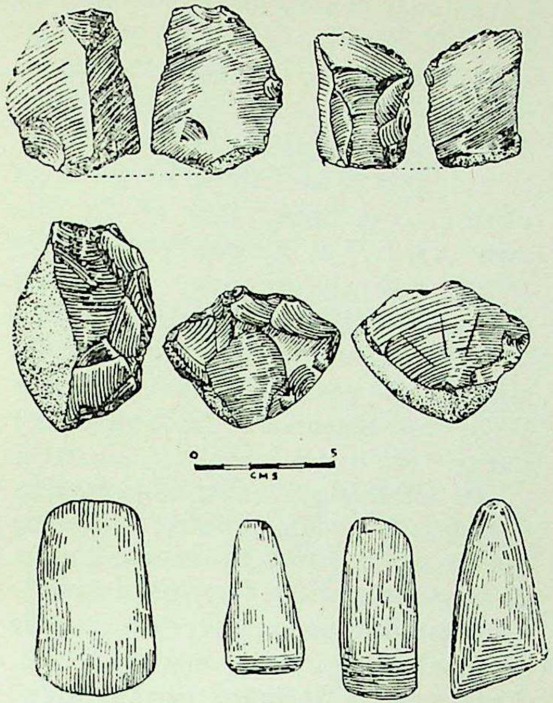


**Fig. 1.13.a.** **Neolithic Assemblage from Ror, Kangra Valley**

show the persistence of an old tradition in later times, even in the context of a different economic set-up.

Secondly, the persistence of the chopper-chopping tools made of quartzite and the evolution of 'chopper-scrapers'—a type closely related to the chopper-chopping implements—may probably show that although in the beginning, during the Palaeolithic, these tools may have been all-purpose tools but with the passage of time these were found suitable for a particular job; say hard cutting, or some such thing, and it persisted in being used for that sort of a job throughout the Stone Age. The environmental factors may have still more helped in keeping them in use. If so, the contemporanity of the chopper-chopping tools with the neoliths should not be considered impossible, particularly in areas of comparative isolation, as the Himalayan environmental conditions present. That it is not a mere supposition is proved by the excavations at Tut-Kaul and other places, mentioned earlier in connection with the Gissar Neolithic Culture of Tadjikistan.

### The Problem of Microliths

In connection with this parallelism an objection may be raised. The Hissar Culture embodies in it the microlithic element, while the Kangra Valley culture does not; at least, so far it has not come to our knowledge. Although it is hazardous to forecast anything in archaeology, the chances seem to be in favour of its absence, particularly of the geometric types. The blades and bladelets may, of course, be found. The reason is simple. In Tadjikistan there was a strong base of the microlithic industry in the Mesolithic times which immediately preceded the Neolithic period. It was, therefore, natural that it continued to exist along with the neolithic assemblage of the Hissar Culture. Situation similar to it existed in India in the Deccan also where microliths, including geometric types, continued to exist along with the neolithic celts as well as copper and low-grade bronze celts of the Chalcolithic period. But the same was not the case with northern India. Microliths—crescents, triangles, trapeze, etc.—have so far not been found anywhere from Kashmir to Kangra. Naturally, if these have not occurred with the neoliths, there is nothing surprising in it.

Any attempt to see in this complex the movement of the Kashmir Valley or the Deccan neolithic cultures is, at the present state of our knowledge, a dangerous proposition. As the

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

Kashmir Valley neolithic culture has an independent status of its own, so may be the case with the Kangra Valley neolithic culture. At least for the present this is a better and objective approach.

To conclude, it may be said that the amount of parallelism that exists between the Hissar Culture of the Tadjik depression (southern Tadjikistan) and the Kangra Valley neolithic cultures is a clue to appreciate the character of a neolithic culture in one of the mountainous zones of this part of the world. At this stage no suggestion of any relationship betweem them can be made. More explorations and excavations on the Indian side will be needed to arrive at a definite conclusion of extra-territorial relations and influences, if they are there. At this stage one can only say that the Kangra Valley polished celts need not be separated from the rest of the tools found at Ror since it has been proved beyond doubt that the polished axes exist along with chopper-chopping tools and flake implements in Tadjikistan, a region near India. In other words, the entire collection at Ror may belong to a single complex and may compare well with the Hissar Neolithic Culture of the 3rd millennium B.C.

## Aceramic Neolithic

### GUMLA

Where the Gomal meets the Indus, a big flood-plain can be seen dotted with ancient sites. One of the sites on the Gomal is Gumla which was excavated by Dani (1970-71). Of the four periods of occupation at the site, the earliest (Period I) belonged to the Pre-ceramic Neolithic, somewhat similar to Mehrgarh and Kile Gul Mohammad in the Quetta region. The thickness of this deposit is 2/3rd of a metre. The human occupation is marked by two big pits and a number of artefacts of stone and bone. One of the pits measured 1.75 m in diameter and contained ash and charcoal bits. The other was slightly bigger, a perfect circle, with margins strengthened by whitish clay pitching. The excavator feels that these were the community ovens.

In all, thirteen stone objects, consisting of saddle querns, rubbing stones, pestles and balls were found. Besides these, fifteen microliths made on chert, flint and jasper, one example on chalcedony, were also recovered. These tools include parallel-sided blades, awls, scrapers of different types, one burin and one tranchet.

Neither pottery nor any metal object was found in these levels.

### RANA GHUNDAI

Some 14 km. from Loralai, towards the east, lies the ancient mound of Rana Ghundai. The 13 m thick deposit has been divided by the excavator (Ross 1946) into five periods—A to E—from bottom upwards. Of these the earliest (Period A) is Aceramic Neolithic.

The cultural equipment consists only of fragmentary chert blades and a few bone-tools. There has not been any recognizable remains of mud or mud-brick houses. In all probability, therefore, people lived in huts and practiced hunting. However, domestication of animals was an equally important occupation with them. The bones of sheep, goats, ass, onager, Indian ox, have been collected in large numbers. Obviously, meat diet of wild and domesticated animals both went with their subsistence economy. So far no definite evidence of cereals and agriculture has been recognized.

### MEHRGARH

Recently (Jarrige and Le Chivallier 1977) an epoch-making discovery has been made in the field of Aceramic neolithic culture-complex of Baluchistan. Some 150 km. south-east of Quetta, but still within the Bolan Pass, at its foot to be exact, lies the site of Mehrgarh. It spreads over an area of 100 hectares and covers some 9 m. deposit. The mound, partially cut by the river, overlooks the ever-flowing water of the Bolan. The deposit is interbedded with alluvial strata, a feature which clearly shows that the site was repeatedly flooded.

It is significant to note that although the occupational deposit at the site passes through different stages of the Chalcolithic and Bronze Age cultures, the northern and eastern sides have not yielded even a trace of these stages. In January 1977, the excavations undertaken near the edge of the mound on the river side have yielded the evidence of an Aceramic Neolithic culture. Two structural levels were uncovered, the lower one was found better preserved than the upper one. Here a small quadrangular room communicating with another one lying outside the limits of the dig was exposed. The walls were found made of mud-bricks bearing some finger-marks. One polished stone-axe was found close to the surface in this area of the site which originally may have belonged to these levels.

The acreamic deposit has also yielded a high percentage of fine small retouched blades and a few microliths, all of cherty stones. Fragments of stone bowls as well as a few stone adzes, many pestles and grinding stones, one ochre-coloured stone spatula decorated with incised patterns and some stone beads are the other associated items unearthed at the site.

Along with the various categories of stone tools and domestic objects, a number of bone tools of very good quality have been found. These and other bone fragments clearly show that there was a high percentage of cattle at the settlement.

### KILE GUL MOHAMMAD

The site, located just north of Quetta City, has also yielded the same evidence in its lowest levels (Period I): a village settlement of aceramic neolithic times. We have here the remains of huts of piśe and probably of wattle and daub. The animals represented through their bones include sheep, goats and cattle. Sickle blades, polished stone-axes and bone points formed their tool-kit. The upper-most level of this period has given us the $^{14}$C date of 5300±200, i.e., around 3300—3500 B.C., which, when corrected according to MASCA system, may go back to 4000 B.C. to 4500 B.C.

Here it may be pertinent to quote Fairservis (1971 : 137) since although in 1956, when he had just excavated the site, he had recognized the existence of aceramic period at the site yet when in 1971 he wrote the book *The Roots of Ancient India*, he, under the influence of Braidwood, clubbed it unwittingly with Period II which is distinctly marked by a handmade, sometimes basket-marked ware which was occasionally painted with red slip, and houses made of mud-bricks. He observes, "Nothing quite comparable to the lowest levels at Kile Gul Mohammad (KGM I) has yet been found elsewhere in Baluchistan. The cut at these levels was no more than a metre square and we can wonder as to whether a true sampling of the level was obtained. For this reason I have placed both KGM I and KGM II in the same phase and treated them as one here. Questions have been raised as to whether one should call KGM I preceramic or aceramic or perhaps ignore it as a kind of bad dream. *The fact is that KGM I has at least a dozen phases* of occupation (or habitation) represented in it and that there is a slow and gradual appearance of pottery in KGM II, suggesting a slow acceptance of the trait. What is significant is the fact that both KGM I and KGM II are essentially the same cultural assemblage, and as R.J. Braidwood indicated at Jarmo, whether or not pottery was present at one time or another can be overplayed to the deteriment of the essential point—the presence of a characteristic way of life". (Italics mine)

The excavations at Mehrgarh has turned the table since it clrealy proves that in the Quetta Valley itself there was another site of aceramic neolithic which Fairservis had missed. Incidentally, it also shows that no archaeologist should ever try to tamper with his stratigraphic sequence based on strict principles of archaeological assemblages whatever may be the observations of anthropologists on their cultural significance. Interpretations of this kind are often subjective and, therefore, keep on changing with time, but the same does not apply to the faithful recording of the archaeological data.

In Baluchistan, to be exact, in the Quetta region of the Bolan Pass, we have definitely a distinct phase of human occupation which is represented by Aceramic Neolithic Culture. Such a situation exists in Afghanistan also.

### AK KUPRUK I AND II

It was as far back as 1959 when northern Afghanistan was placed on the map of the Neolithic cultures. Louis Dupree had laid his first trench, some ten metres deep, in a rock-shelter locally called ghar-i-mar (house of snake) or Ak Kupruk I. The site is located on a high terrace of R. Balkh near the town Ak Kupruk from which the neolithic culture derives its name amongst archaeologists (Dupree 1964).

Some three metres of upper-most deposit yielded Scythian-Kushanian complex. There was then a sterile level. Below this, within several layers of what is called Gravel 1 deposit, Dupree found the remains of neolithic habitation. At another rock-shelter called Ak Kupruk II a similar deposit was encountered.

Below Gravel I of the neolithic times, once again a gap in occupation is marked by sterile grey sands. Below this occurs Gravel 2 in which mesolithic tools were found embedded.

Radiocarbon dates place the upper-most level of the Neolithic in 6600 B.C. (8650±100) while the lower-most level of the Neolithic, which was non-ceramic, is placed in 5200 B.C. (7220±100). The upper-most level of the Neolithic (Fig. 1.14.) which is marked by a hand-made ceramics and flint tools, is dated to 500 B.C. (7030±110).

### TENTATIVE CHART OF CERAMIC CULTURAL PERIODS AT AK KUPRUK DARRA-I-KUR AND HAZAR GUSFAND

| *CULTURAL PERIODS* | *AK I* | *AK II* | *AK III* | *AK IV* | *D-I-K* | *H-G* |
|---|---|---|---|---|---|---|
| Modern Nomadic : 20th century A.D. | × | × | × | × | × | × |
| Late Islamic : 13th-19th century A.D. | × | | | | × | × |
| Early Islamic : Pre-13th century A.D. | × | × | | | | × |
| Later Iron Age (Kushano-Sassanian) : ca. 600 A.D. | × | × | | × | × | × |
| Early Iron Age : ca. 200-400 A.D. | × | × | | × | × | |
| "Goat Cult" Neolithic : ca. 1800 B.C. | | | | | × | |
| Chalcolithic ( ? ) : ca. 4300 B.C. | × | | | | | |
| Ceramic Neolithic : ca. 5000 B.C. | × | × | | | | |

**Fig. 1.14** *After Dupree*

Here it may be pointed out that the stratigraphy and radiocarbon dates require rechecking.

The Neolithic assemblage at these sites, as stated above, has been broadly divided into two—Non-Ceramic, the earlier, and Ceramic, the later. It may, however, be noted that the associated stone and bone objects exhibit one and the same typology. Further, although there is a marked difference between the lithic and bone implements between the Upper Palaeolithic / Mesolithic and Neolithic assemblages yet a certain amount of continuity exists between them. The excavators (Dupree and Davis 1974 (June), 40) observe that in the Neolithic "more large blades occurred, in addition to the introduction of a collection of 'sickle blades', exhibiting familiar sheen caused by the reaping of wild or cultivated grasses. A series of points, somewhat similar to those of the Kuprukian, occurred in increased numbers. Some dihedral burins continued to show up, as well as a single pressure-flaked unifacial leaf-shaped point and a fragment of a bifacial point. The debitage indicates a heavy dependence on flake tools as well, however...Many notched artifacts on flakes appeared in AK I and II Neolithic. Relatively few had been found in the Kuprukian Upper Palaeolithic."

Bone implements were primarily awls, points and an interesting series of plain and decorated needles.

## Ceramic Neolithic

### SARAI KHOLA

In north Pakistan a neolithic culture with a characteristic pottery has come to light from the lowest levels (Period I) of Sarai Khola, located near Bhir Mound of the ancient site of Taxila, in the Potwar region, and at Jalilpur, near Multan on the Ravi, some 65 km. downstream from the well known Bronze Age site of Harappa. Although at present there is hardly any known complex from Central Asia, Afghanistan and Baluchistan which may compare with it but the possibility of getting one in any of these regions, particularly Baluchistan, cannot completely be ruled out.

At Sarai Khola, the neolithic complex is very much limited, confined to four or five layers. It consists of a kind of handmade thick Burnished Red Ware, simple bone implements, a variety of polished stone celts, and some long and short chert-blades. At Jalilpur, besides all these categories of objects, we have a pale red ware, light in weight and soft in texture as if under-fired. A rectangular bead of gold sheet with tubular perforation, several barrel-shaped cylindrical beads of terracotta and terracotta net-sinkers further enlarge the list of material items. Significantly enough, the excavated remains of Jalilpur period I also include a large number of bones of cattle, sheep, goat and gazelle since most of them belong to the domesticated species.

At Sarai Khola no mud or mud-brick structure was encountered although at Jalilpur their traces have been found.

*Pottery* : The pottery from Period I levels of Sarai Khola is all handmade with surface treated with dark red slip. It is burnished; a few, both internally and externally, and others only externally. Generally, their fabric is fine but some are found using tempered clay. The body is, by and large, plain and thick. The bases often show basket impressions, possibly they were made resting on a mat or they were placed on a mat for drying after they were made elsewhere. This feature has also been noted in the neolithic pottery of Burzahom (Kashmir Valley) as also Yang-Shao neolithic pottery of north China, although we do not propose any direct relationship between Sarai Khola Ware and these wares. It is to be noted that in some examples a thick coat of mud was applied on the exterior surface on which sand was dusted, a technique found in use not only at Jalilpur (Period I) as was expected, but also at Amri I A (Mughal 1972).

The Sarai Khola Period I pottery is marked by only four major types :

No. I — Handmade Red Burnished Vessel : some showing splayed-out and dented rims. No complete form found.

No. II — Handmade Ware with Applique Surface. It is marked by internally carinated necks and coarse surface due to the mud coat.

No. III — Burnished vases with everted rim. It includes small vessels with short and outturned rims.

No. IV — Red Burnished bowls. It consists of bowls with flaring sides whose outer edges are indented with deep incisions. It is generally of fine fabric.

*Stone Implements:* They include microliths (1) polished stone celts (1) and polished stone chisel (1). In period II their number increases substantially and items like maceheads, grinding slabs and pounders, as well as beads are added; Period II, however, belongs to the chalcolithic Kot Diji Complex.

*Bone Objects* : Bone objects include awls (1) perforators (1), spatulas (2), pressure flakes (2) and antimony rods (2). In Period II not only their number increases substantially but also several new types, such as points, hair-dividers buttons with round incised decorations and combs are added.

### JALILPUR

*Pottery* : It is generally underfired, light red handmade ware of thick texture. Some of the pots show the use of tempered clay also. A number of them have their exterior surface coated with a mixture of clay and pottery bits. Their types include, besides the Sarai Khola types, a small percentage of carinated cups and dishes. Some of these types resemble the handmade pottery from Amri I A. It may also be noted that bichrome wares painted black or brown or chocolate on red appeared in the upper-most levels of Period I. It links Period I with Period II almost organically.

Stone, bone and gold objects have been detailed earlier, so also the structures and bones of animals. However, it may further be noted that Jalilpur I has yielded the evidence of at least three occupational levels and a pair of floors made of rammed earth on lime beddings (Mughal 1974).

### MEHRGARH

The aceramic village of Mehrgarh (southern portion) was partly overlaid by a chalcolithic settlement, now greatly damaged by flood. One trench was laid out there. Two metres of loose deposit yielded an enormous quantity of potsherds; half of them are wheel-thrown, some being decorated by a rather limited number of geometrical motifs, typical of the early Kile Gul Mohammad style, of about 4000 B.C. The other sherds are parts of very coarse vessels roughly shaped by finger-pressure in a mixture of clay and straw. A few sherds bear basket marks. Below, a level displays mud-brick walls and occupational floors coloured with red ochre. The blade and bone industries show several affinities with the earlier finds of the Aceramic times, but new elements are obvious and three atypical potsherds, associated with these floors, are so far the earliest evidence of ceramic at this site. Further south, excavations were undertaken in December 1976 in an area which yielded sherds bearing geometrical patterns of a later Kile Gul Mohammad style, along with potteries decorated in a beautiful early Togau style displaying fine caprids and birds. 'So we notice at Mehrgarh an evolution comparable with what can be seen, for instance, at Sialk or in Turkmenia, from potteries exclusively decorated by a rather limited number of geometric motives (Sialk 1 or Djeitun) to the naturalistic motives of caprids and birds (Sialk III or Namazga II).'

The next stage is well represented at the main mound which stands at the southern limit of the site. Three main phases, covering the 4th millennium (may be fifth also) and the first half of the 3rd millennium B.C. 'have provided numbers of data about the proto-urban phases in these regions. Fresh evidence of craftsmanship development of a semi-industrial basis, of social differentiation, along with the setting out of commercial relationship with Eastern Iran (Sharhi-i Sokhta I and II), Afghanistan (Mundigak III and IV) and Central Asia (Namazga III sites), extend greatly our knowledge of the background of the Harappan Civilization. The uncovering, in the last period of Mehrgarh, of a monumental brick-platform, in front of which stands a colunnade of square mud-brick pillars, later transformed into a pilastered wall takes a special significance in a context marked by the building of the contemporary palace of Mundigak.'

Mehrgarh, therefore, presents a complete sequence of early cultures and establishes the fact that Baluchistan should no more be considered a refuge-area of the poor Iranian villagers.

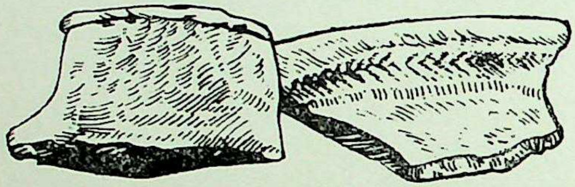


**Fig. 1.15. Neolithic incised pottery from Ak Kupruk**

### BURZAHOM

The site is situated some 24 kms. north-east of Srinagar in the Kashmir Valley. It is located near the Dal Lake over a flat hillock of silt and loam facing the Mahadeo peak of the Himalayas. It was first excavated in 1935 and subsequently from 1961 to 1968. The cultural deposit, at places four metres thick, has been divided into three major periods—Neolithic, Megalithic and Early Historical. The 'Megalithic', however, is neolithic in terms of economy and habitational pattern; only the planting of memorial stones, called 'menhirs', a term often used in the megalithic context, appeared on the scene. The Neolithic (Period I) has been divided into two phases—phase I(Lower) is characterized by pit-dwellings (?) and phase II (Upper) by mud-brick houses; the succeeding 'Megalithic' period (Period II) is, for all practical purposes, only an extension of phase II of Period I (Khazanchi 1961).

#### *PERIOD I*

The people who occupied the site for the first time during phase I seem to be semi-nomadic hunters and fishermen. This is borne out by the fact that the region abounds in lakes and ponds, and the bone-tools were of hunting type; harpoons, pins, arrowheads and awls. They are supposed to have lived warmly in pits, some of which had landing steps. The pits, as a rule, were roofed, probably by covers of skin supported on reed-matting held on wooden posts. Polished stone-axes and handmade grey ware pots were used in everyday life (Fig. 1.16).

A change in the habitational pattern occurred in phase II when the whole ground was levelled and the pit-dwellings were abandoned. The phase II people built rectangular houses and platforms of mud-bricks and plastered the floors with mud mixed with red ochre. A few new types of objects also appeared, such as rectangular polished stone and bone harvesters with two holes along one of the longitudinal sides, copper arrowheads (during their last stage of occupation) and wheel-turned pottery, etc. The bone harvesters and copper arrowheads seem to have been either imported from China, or were the local imitations of the Chinese originals. The habitation was stabilized and permanent, and the people buried their dead ceremoniously. Interestingly enough, the excavations have yielded the burials even of animals.

#### *PERIOD II*

The Neolithic-Megalithic period had the same pattern of living and material equipment as in phase II of the Neolithic period (I) with the addition of megalithic menhirs and some human and animal burials.

### *PERIOD III*

The Early Historical period (III) has not yielded any burial; only pottery, beads, etc., defined the nature of the culture-complex of this period.

Surprisingly enough, the culture was almost devoid of domesticated animals and plants; at least so far they have not been reported. One may, therefore, be tempted to call it 'mesolithic' rather than neolithic. However, it may be argued that the polished-stone harvesters and ring-stones are agricultural implements and wheel-turned pottery and mud-brick houses are indicative of permanent settlements. Both of these features transcend all the known limits of a mesolithic culture.

At Burzahom, in all, 14 burials have been unearthed—of these nine are of human beings and five of animals. Significantly enough, both the types of burials are found laid in close proximity and within the habitation.

### PITS FOR DWELLING AND STORAGE

'In Period I, a number of dwelling-pits, cut directly into the natural soil, were exposed. The largest of these measured 2·74 m at the top and upwards of 4·57 m at the bottom and 3·96 m in depth. The side-walls of the pits were plastered with local mud. The three landing-steps, as exposed, reached only to a depth of 1·21 to 1·52 m from the top of the pit, pointing to the probable use of a ladder for entry and exit. The occurrence of post-holes on the surface of the pit indicates the likelihood of a superstructure. The pit-filling showed bands of ash and charcoal, clearly suggestive of human occupation. (Plate II)

Another interesting feature was the existence of a crescent shaped pit separated from a wider pit by a walling of natural soil. The former was perhaps used for storage purposes, as evidenced by its contents, such as birch, burnt or otherwise charred, and burnt clay, along with a broken pot in an inverted position and a bone harpoon. The possibility of the superstructure, consisting of wooden posts and thatched roof covered with birch having caught fire cannot be ruled out. Until recently birch was the normal roofing-material in this region.

The occurrence of stone hearths near the mouth of the pits and the presence of shallow storage-pits, 60 to 91 cm. in diameter, in close proximity, suggests that the pit-dwellers would shift to the ground-level on sunny days. Some of these storage-pits yielded animal bones and a few bone-tools. On the floor of one of the dwelling-pits was found an antler's horn.

In three of the pits were found conical-shaped but irregularly-dressed leaning stones, ·91 to 1·51 m in length and ·22 to ·44 m in width. Their function remains elusive. Two such stones were also noticed in association with a burial of the megalithic phase (Period II).

No grains of any type have so far been obtained in any of the pits.

Summarizing the available evidence, it may be stated that the dwelling-pits of Period I, phase I, were cut into the *karewa* soil, narrow at the top and wide at the bottom with a flat floor and side-walls occasionally plastered with mud. The landing-steps in the deeper pits reached only to a part of the depth, indicating the use of a ladder for further descent. While post-holes on the periphery of the mouth suggest the likelihood of a superstructure of perishable material, stone hearths and small-sized storage pits on the ground-level point to an open-air life during the summer months.

In the succeeding period, Phase II, the mouths of some of the pits, which had by that time got filled up, were plastered with mud, covered with a thin coat of red ochre and used as a floor. The use of red ochre as a colouring-material is attested all over the site. Successive floor-levels of this phase, composed of *Karewa* soil, were excavated in the cutting. An interesting feature of one of the floors was a series of post-holes numbering forty-five and running athwart the trench in an area of 3·96×1·21 m at a depth of 2·13 m below surface. The complex is suggestive of a large structure. No wooden material, charred, decayed or otherwise, was, however, encountered in this area. The alignment was nearly straight. Associated with another floor was a hearth and an oval pit with a mean diameter of 1·04 m.

The next period, Period II, was marked by an intrusion of new ideas into the site. Deep and wide pits were cut into the underlying floor-levels of Period I for erecting megalithic structures. In one case a rubble wall was built over a dwelling-pit. Though no clear plan was discernible, the complex formed a rough semi-circle, opening on the south-eastern side. For keeping the stones in position, a dry-rubble packing was provided. About 1·05 m below surface was exposed a huge stone of the megalithic complex. No structural remains excepting a few post-holes were noticed in the post-megalithic period' (Khazanchi 1968).

## POTTERY

The pottery of the Neolithic Period, phases I and II, was characterized by a handmade ware showing grey, shades of dull-red, drab, brown, buff and burnished black surfaces. In the earlier period, however, the pottery was coarse both in fabric and finish and was represented by bowls, vases and stems. In Phase II a burnished black ware of medium fabric made its appearance. It included such shapes as the dish sometimes with provision for a stand, bowl, globular pot, stem with triangular perforations and a funnel-shaped vase. A distinctive type in the grey or black burnished ware was a high-necked jar with a flaring rim, globular body and flat base. On the lower part of the neck were incised oblique notches. Mat-impressions formed exclusive designs on this ware (Fig. 1.16).

In Period II the pottery, predominantly red ware, was generally wheel-made, though the fabric was coarse. Some of the wares of the preceding period limitedly continued.

Period III, roughly belonging to an age earlier than the Buddhist site of Harwan, ascribable to the third-fourth century A. D., yielded a red ware of fine-to-medium fabric, often slipped and mostly wheel-made.

## BONE TOOLS

The bone tools recovered from the excavations were singularly individualistic in character and showed very finely polished and sharp working-

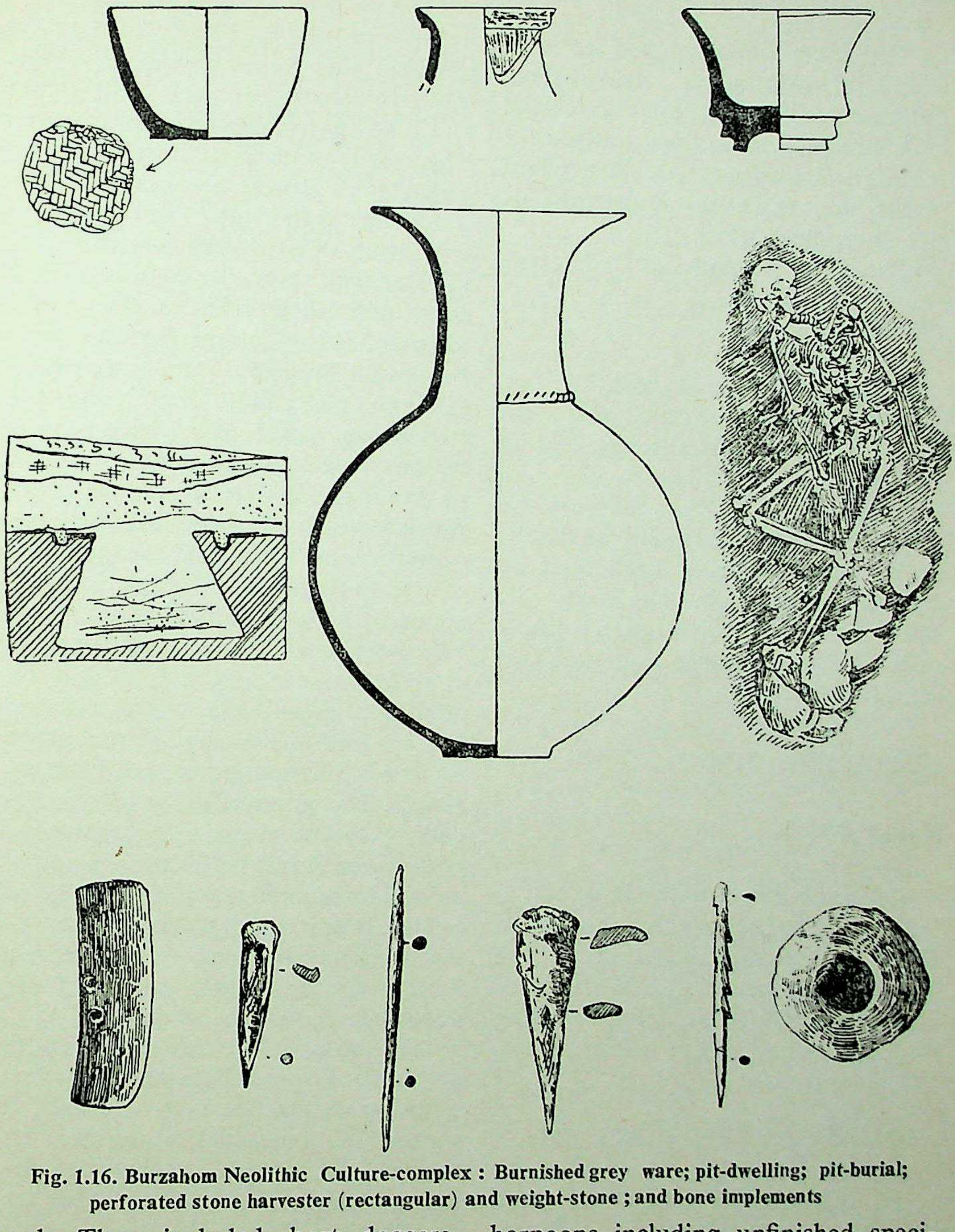


**Fig. 1.16. Burzahom Neolithic Culture-complex : Burnished grey ware; pit-dwelling; pit-burial; perforated stone harvester (rectangular) and weight-stone ; and bone implements**

end. They included short daggers, small and large points, gravers with curved and oblique working-edge, awls, antimony-rods, polishers or scrapers, chisels, needles with eyes and harpoons, including unfinished specimens. The greatest frequency of bone tools was observed in Period I, Phase II. In Periods II and III, the polish on them was of a low order. (Fig. 1.16).

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

## STONE TOOLS

The stone tools included polished axes with rectangular cross-section, harvesters, polishers, pounders, chisels mace-heads, shoe-last type double-edge picks, perforated picks, double edged points, etc. It was certainly extremely rich in typology. (Plate III)

There were no blades or blade-cores.

## ART

A unique piece of neolithic art, showing a hunting scene, also came from the site. It is a stone slab with three registers: the lower shows an antler being picered from behind with a long spear by a hunter, and an arrow in the process of being discharged by another hunter from the front side. The middle and top registers show respectively a hunting dog and two suns. (Plate IIIa)

## DISPOSAL OF THE DEAD

### Human Burials

Of the human burials, six belong to Period I (phase II) and three to Period II. Human burials occur inside the houses and below the floors. Such floors are met with at depths ranging from one metre to three metres. (Plate IV)

### *NEOLITHIC (PERIOD I, PHASE II)*

Of the total of six burials, which belong to this phase, four are Complete Inhumations and two are Fractional Burials. The Complete Inhumations consist of three Flexed burials and one Extended burial. One of the Flexed burials is that of a child.

## FLEXED BURIALS

In one of the Flexed burials the skeleton was found placed in north-east to south-west orientation, the skull being towards the north-east. The dead appears to have been an important person because of the following facts: (1) The skull was completely painted with red-ochre. and (2) The skull shows 'seven fihished and four unfinished holes in the *norma lateralis* position on the parietal bone between Bregma and Lambda' (Sharma 1967 : 240). These are the trepanning marks. It has been observed that none of the holes had any sign of healing. (3) The grave was richly furnished with offerings. A deer was captured and slain, and the meat was offered to the dead. The flesh has disappeared but the skull and antler pieces have been found buried with the dead at different levels. It appears that the offering of meat items was a repeated process and the filling of the grave involved different stages of funerary rituals. The grave-offerings also included a soapstone, circular disc-bead with three linear perforations and 'an animal jaw completely painted with red ochre'. It appears that these were important items of the offerings and were linked up with the status of the deceased.

The other adult flexed burial with arms raised up to the head and palms covering the face seems to be that of a woman of some importance since the remains of a beautiful necklace of carnelian beads have been found near the neck region. The body was oriented south-east to north-west.

The third flexed burial, found in the embryonic positon, was of a two-year old child. It was found oriented west-east.

### EXTENDED BURIAL

The fourth complete inhumation is an extended burial of an adult. The skull, unfortunately, has been found considerably damaged, probably, 'due to the thrusting of stone pieces inside it'. The body was laid in the south-west to north-east orientation.

### FRACTIONAL BURIAL

The post-exposure bones of an adult were found in a burial pit slightly more than half a metre deep and plastered with lime. The pit was sealed by a floor of yellowish sandy clay. The bones were treated with red ochre. It appears from the way the bones have been found arranged in the grave that a conscious effort was made on the part of the survivors to collect the bones and put them in an order which may indicate that the body was buried in the flexed position. Another unique feature of this burial is the presence of two long conical stones placed over the grave in a position inclining towards the ankles. The grave-goods consisted of a barrel-shaped bead.

The second fractional burial consisted of a pit containing a few post-exposure bones, with the skull kept in the north-east corner. The bones, as usual, were treated with red ochre solution.

### *NEOLITHIC—MEGALITHIC (PERIOD II)*

All the three burials hitherto encountered in the excavated levels of this period belonged to the category of the Flexed Burials.

### FLEXED BURIAL

The Burial no. 1, of an adult male was placed on a level higher than that of the rest. The grave-pit was irregular with sides slanting and tapering towards the top. The sides of the pit were lined with stone pieces. The skeleton found 'was aslant with the skull at a higher level (at a depth of 1·75 metres) and feet at a lower level (at a depth of 2·3 metres) from the top.' The right leg was bent a little and then brought below the left leg at an angle. Near the right foot the pit had a cluster of bigger stones. The grave offerings consisted of five ceremonial earthen pots, three of which were placed to the right and two to the left of the left leg. The grave did not yield any animal bone.

The second burial, an oval pit plastered with lime, had the body of an adult in a highly flexed position. It was oriented north-west to south-east. Interestingly enough, deep into the pit a dog was found buried.

The head was found severed in the third burial. The excavator called it an 'accidental burial.' In a sense, it is a fractional burial.

These flexed burials exhibit certain elements which are new and certain others which are in the continuation of the old ones. The points of departure from the earlier customs include a total absence of red ochre paint on the bones, and the change in orientation of the dead body : from the east to the west. The points of continuation include the nature of the grave-pit which was oval and plastred with lime, and the filling of the grave-pits which included pot-sherds, stone pieces, ash, etc.

### *Animal Bones in Human Burials*

The bones of animals, probably of

wild species of the dogs, goats and stags have often been reported from the graves of human beings. These are always disarticulated and, therefore, supposed to have been the remains of the meat items offered inside the grave. The bones have been found on the level on which the human skeletons were found rather slightly above that level.

### Animal Burials

The burials, which are exclusively of the wild animals, are found closely placed with the human burials. Eleven such burials have come to light so far but none of them belongs to phase I of the Neolithic period (*i.e.*, Period I). Two burials belong to phase II of the Neolithic period and nine to the Neolithic-Megalithic period (*i.e.*, Period II). Their general orientation was north-south, the skull being placed towards the north. There was only one exception in which the dead body was placed east-west. (Plate V)

#### *NEOLITHIC* (*PERIOD I : PHASE II*)

Only two burials were dug in this phase : one was a flexed burial and the other a fractional burial.

##### FLEXED BURIAL

Only one example of the flexed burial, that of a dog, has been found. It was of the usual type, and devoid of any offering.

##### FRACTIONAL COLLECTIVE BURIAL

The only grave of this type found was in an oval pit (with its longer axis nearly 1·35 metres) dug into the floor of a house. The excavator discovered inside the pit two antlers and the bones of five wild dogs. The dogs were represented by five intact skulls to which were attached portions of vertebral columns in articulated position. Other fragmentary bones recovered from the pit were mostly ribs, limb bones and fragments of pelvic girdles. The grave was devoid of any offering.

It is significant to note that all the loose bones bore fracture marks and they were kept in a rather disorderly-manner. Sharma (1968:42) therefore feels that the dogs were sacrificed, stripped of their flesh, and then ceremoniously buried.

#### *NEOLITHIC-MEGALITHIC* (*PERIOD II*)

The burials of this period are also Complete Inhumations and Fractional, the former consisting of Single and Collective burials.

##### SINGLE FLEXED BURIALS

Only two examples of this category of burials were found in the excavations, one was that of a wolf and the other that of a dog. They were of the usual type and without any grave-goods. However, the carcass of the wolf was found completely charred, and kept in the grave-pit filled with a large quantity of ash. Since the carcass was found completely intact, it is easily surmised that the animal was burnt in *situ*. It is significant to note that it is the only example of cremation at the site.

##### DOUBLE FLEXED BURIALS

All the animals buried in the flexed manner were the dogs, except for two examples of wolves. The dead body was buried in the flexed position either on its right or its left ; only in one example a dog's skeleton was found lying in the supine position, *i.e.*, resting on its back with legs upwards.

Only four 'double burials' have been excavated so far. The graves usually contained two bodies of the same species of animal, and in several examples these were two dogs. There was, however, one exception in which a wolf was buried along with a dog. It is interesting and significant to note that in all the examples of 'double burials' the two carcasses were placed at two different levels of the same grave-pit. The oval pit in every case was found containing only bones and earth.

### FRACTIONAL COLLECTIVE BURIAL

Only one example of this category of burials has been discovered. The pit, about 0·30 metre deep, contained the bones of various animals at two different levels. The disarticulated bones of a Himalayan Ibex (*Capra falconeri*) were found in the upper level, nearly 1·90 metres below the surface.

The antlers, and fragmentary bones of the dogs, sheep and goats were found collected in a group without any proper arrangement and kept in the lower levels, nearly 2·20 metres below the ground level.

### AK KUPRUK

#### *Ceramic Neolithic (Ak I and Ak II)*

Belonging to the early phase of the Neolithic, we have here a crude, soft, chaff, crushed limestone and crushed sherd tempered ware with flat bases and simple rounded rims, probably basins and globular-jar types. From the upper-most levels we have also a better fired ware with zig-zag incised decorations near the neck, although the excavators feel that 'this ware may fit into the overlying Ak Kupruk Chalcolithic or even later' (Dupree and Kolb 1975 : 49). (Fig. 1.15)

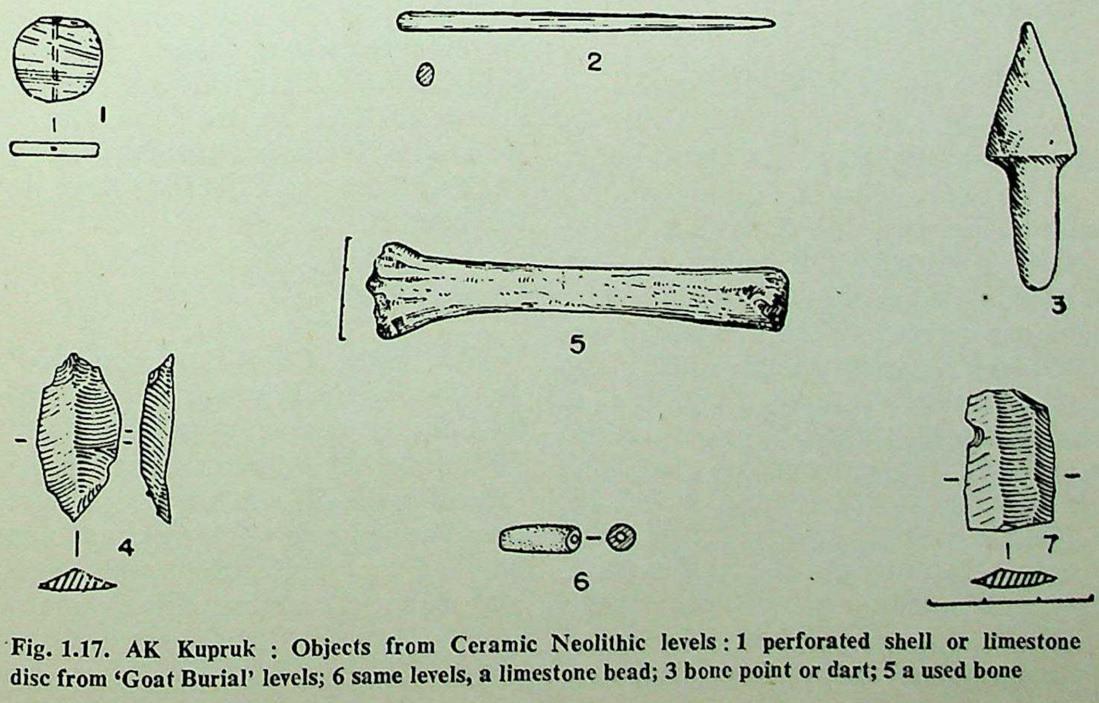


**Fig. 1.17. AK Kupruk : Objects from Ceramic Neolithic levels : 1 perforated shell or limestone disc from 'Goat Burial' levels; 6 same levels, a limestone bead; 3 bone point or dart; 5 a used bone**

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

**Ak Kupruk Neolithic-Chalcolithic (Ak I)**

Basically, this phase is also Neolithic but for the discovery of four fragments of copper (one is embossed) found in the lower, undisturbed parts of the upper graves above the Ceramic Neolithic. The associated pottery is crude and soft, like that from the earlier horizon, Aceramic Neolithic, but certainly in larger varieties, such as Coarse Soft Buff Ware, Limestone Temper Ware, Coarse Hard Buff Ware, Crushed Stone Temper Ware, Coarse Hard Buff Ware, Crushed Stone/Pebble Temper Ware, and Hard Buff Limestone Temper Ware. Individual pots were made on a slow wheel. The neck and the body were made separately and then luted. Large and small as well as medium sized globular jars and basins with flat and rounded base were the main types. The pottery as a whole has been without any wash or slip.

## DARRA-I-KUR

### *"GOAT CULT" NEOLITHIC*

*Stone Objects :* At Darra-i-Kur, where the remains of a Late Neolithic phase occurs—the 'Goat Cult Neolithic', of 2nd millennium B.C.—we have two types of stone tools : (i) flint blades (some with fine alternate retouch) and possible sickle-blades, and (2) a series of relatively large diabase points with thickened cross-sections and exhibiting extensive use along both edges as well as the central ridge. The other stone objects include celts, a slate (?) knife, a broken jasper point, steatite spindle-whorls, plus a series of quartzite pebble tools, a limestone (?) bead (Fig. 1.17) and a perforated disc of shell with two holes (Dupree and Davis June 1974, 53). Grinding stones and broken stone-mortars along with a possible obsidian (?) bracelet fragment almost complete the list of important antiquities, although the excavators have also included a unique perforated long bone, bevelled near the perforation, which may have served as an ornament or an amulet. This is, of course, besides the pottery.

*Pottery :* The typical ware belonging to this culture is known as Baba Darwesh Black Ware which is of calcite tempered variety. The main type is represented by globular jars with medium necks having slightly flaring or erect rims. Many of the sherds are reddish grey in colour, probably because of differential firing. They are found decorated with incised, striated, puntuated and channeled patterns, such as chevrons, multiple parallel lines, outlined triangles, cross-hatching, zig-zags and ladder motifs.

This pottery has been compared by the excavators with south Siberian and Central Asian incised decorated pottery of late Bronze Age times. Burzahom Neolithic (Kashmir Valley) has also been mentioned by them in this context.

**Other Features**

The term "Goat Cult Neolithic" was given to the late neolithic cultural horizon because of three intentional pit-burials of domesticated goats located at the site. Of these, two were found decapitated while the remaining one had the skull articulated. Directly underneath and possibly in association with Burial 3, skull fragments and several long bones of one or two children were also discovered.

A series of 80 post-holes, about 2 to 4 cm. in diameter, were located just under the lip of the cave and, according to the excavators, 'may indicate the use of culinary racks, windbreaks, other shelters, tethering posts, etc.'

## DISCUSSION

The Neolithic of northern Afghanistan, as located at Ak Kupruk, goes with the semi-nomadic facies encountered in Soviet Central Asia, other than south Turkmenia; that is the impression one gets from the pottery and flint tools associated with the early Neolithic, both aceramic and ceramic assemblages. The Late Neolithic, the 'Goat Cult', from Darra-i-Kur, goes with the Kashmir Valley, that is the impression that one gets from the burial practices. But this impression, also of the excavators, may not be correct since,as they have themselves pointed out, the black gritty ware with incised decorations goes more with the Neolithic pottery from Soviet Central Asia and southern Siberia, *i.e.* Kelteminar of the Khorezm.

On the whole, although the radiocarbon dates take back the antiquity of the Ak Kupruk Ceramic Neolithic to about 5000 B.C., if not earlier, we do not come across the situation of agricultural economy as was developing in south Turkmenia during the Djeitun period. However, we also do not subscribe to the views expressed by the excavators who see in it the elements of Khorezmian pottery. It may be pointed out that the Kelteminar Culture never crossed the Amu river in southern Tadjikistan and southern Uzbekistan, the river which alone should have been the source for this culture in Afghanistan. As we have already shown, in Tadjikistan the oldest neolithic culture is Gissar Culture, which does not appear to be older than 3000-3500 B.C., having an altogether different kind of tool-assemblage. Southern Uzbekistan also has as yet not yielded anything comparable with Ak Kupruk in assemblage as well as chronology. As a matter of fact, even the Khorezmian stage of the Kelteminar Culture does not appear to be as old as 5000 B.C. Therefore only south Turkmenia, where the Neolithic went as far back in time as 6000 B.C., could be the probable source for the Ak Kuprukian neolithic.

In south Turkmenia, we have two kinds of ceramic neolithic : Djeitun and Uzboi. Djeitun, by 5000 B.C., had already established a very distinct culture-complex of painted ware, etc., the like of which is just not met with at Ak Kupruk. The Uzboi Culture, which was possibly inspired by the Kelteminar, at least partially, is also not older than 4000 B.C. Moreover, before Uzboi could reach north Afghanistan, it had to cross the foothills of the Kopet Dag, and the deltas of the Tedjen and the Murgab. We have little evidence for that kind of a situation.

All put together, for the present it is not possible to visualize the stimulus of an outside agency for the birth and growth of the ceramic neolithic cultures of Ak Kupruk. It could as well be a local phenomenon.

The Goat Neolithic may be an altogether a different story since it belongs to a period when a number of Late Bronze Age cultures of somewhat similar kind had already sprung up from the Amu Darya to the Jhelum Darya, although specific correlations are yet to be worked out.

### The Controversy over the Neolithic Cultures of Soviet Central Asia

In recent years much thought has been expended over the beginnings of Neolithic in south Turkmenia. As exemplified in Djeitun Culture, the economic pattern that was generated during this period, as a result of man, land and animal interaction, was vastly different from that of the preceding Mesolithic complex.

We may, therefore, begin with a straight forward question : in what lies the origin of the Djeitun Culture ? Masson does not seem to be categorical on this issue. He feels, on the one hand, that the Caspian Mesolithic of Djebel Cave and Dam-Dam Cheshma had something to do with the Djeitun, since microlithic element in the two complexes is comparable, and, on the other, he also shows similiarity not only with Sialk and Yarim-Tepe but also Jarmo for an explanation. Let us examine these propositions in the light of some of the brilliant reviews made by authors like V. Sarianidi (1971), C.C. Lamberg-Karlovsky (1973), M. Tosi (1973-74) and James Mellart (1975).

To begin with, the Caspian Mesolithic (Krasnovodsk region) is a typical product of its own environment which extends from the south-eastern shores of the Caspian Sea in the Krasnovodsk peninsula and ends in the little Balkhan plateau. The area was watered by the Uzboi river, an arm of the Amu Darya, which is now a dried up stream. It never had the potential for the natural growth of food production. It started in 6000-5500 B.C. only, on the present showing. The Caspian Neolithic Culture which followed the Caspian Mesolithic at a comparatively late date, around 4500 B.C., is clearly a food-gathering kind of neolithism in which agriculture was secondary although domestication of animal and pottery making had made the life of the people more secured and, to some extent, even sedentary. The predominance of microliths and selection of caves, where Mesolithic men had been living earlier also, go a long way to establish the character of the Caspian Neolithic which was grossly different from the Djeitun Neolithic. In fact, the Caspian Neolithic has much more in common, even in pottery decoration (incised designs), with the Kelteminar Neolithic of the Amu and Syr Darya deltas than the Djeitun Neolithic. Unfortunately, there is no anthropological evidence for the movement of people from the East Caspian region (Mesolithic) to the (Neolithic) Kopet Dag mt. The Krasnovodsk peninsula is at least 800 km. away from the Djeitun sites with semidesertic steppes intervening between them. There is yet another Caspian Mesolithic—the North Iranian excavated by Coon at Belt Cave or Ghar-i-Kamarband. Besides the usual microlithic outfit, levels 10 and 11 of Ghar-i-Kamarband have yielded cones of unbaked clay similar to those from Djeitun-Depe. Masson sees this also as the immediate predecessor of the Djeitun Culture, although without much substance in it. After a long break here also Neolithic developed.

We, therefore, rule out the claim of Caspian Mesolithic.

In order to substantiate our views regarding the North Iranian *cultural form* let us recapitulate the evidence from Belt, Hotu and Ali Tappeh cave sites. Since the last named site alone has been meticulously studied for the early phases (Mc Burney 1968) we may start with it.

The occupation of the site starts around 10,500 B.C. when the region passed through a cold climate. The faunal remains clearly show that gazelle predominated (60 per cent); goat and sheep (20 per cent) were still not very popular preys.

Period II witnessed a warm climate and decline in the percentage (40 only) of gazelle bones. Now seal, horse, pig, jackal, fox, sheep and goat were hunted in larger numbers.

Period III started around 10,000 B.C. when dry cold spell had again set in and gazelle percentage had again shot up. However, cattle and pig percentage equally increased.

Period IVA again marks a warming-up phase. It is interesting to note that during this phase seals were hunted in larger numbers than the gazelle, sheep and goat. In IV B, however, the percentage of gazelle once again rises over the seal.

Period V (9300 B.C.) again marks the beginning of another cold phase which represents the final stage of the Ice Age. It witnessed the third 'gazelle, optimum, accompanied by a peak in sheep and goat.

It is significant to note that at this point, *i.e.*, around 9000 B.C., Ali Tappeh cave was deserted and "this technologically Zarzian-like culture comes to an end, just as the Zarzian did at Shanidar in northern Iraq. The possibility of early gazelle, sheep and goat herding in this area should not be ignored, especially as there is evidence for domestic sheep at Zawi Chemi a little later, and that in an environment not naturally suitable for sheep. The origin of sheep domestication may well lie in Iran east of the Zagros and from here it could have spread westward to Zawi Chemi and Bus Mordeh as well as eastward to Ghar-i-Asp in northern Afghanistan" (Mellart 1975, 209). But that is a separate issue, what is important to note is that the period of transition from the Pleistocene to Holocene is marked by the desertion of not only Ali Tappeh Cave but also all other caves in this region.

The Hotu and Belt caves were, however, reoccupied around 7,500 B.C. ($^{14}$C date) with an entirely different kind of culture-complex. Now sickle-blades predominate which may show that the people went for native wild varieties of cereals, barley and emmer. "During the warm pre-Boreal and Boreal stages animal bones show a steady increase in caprids (sheep and goat) from Hotu 4 with 50 per cent, through Hotu 3 with 72 per cent to Belt Cave (layers 7-9) with 84 per cent. In the Atlantic phase, after c. 6,100 B.C., Soft Ware pottery appears and soon afterwards all the caves are deserted. Further north, levels 2-4 at Jebel show a predominance of gazelle, but by c. 6,000 B.C. in layers 5-6 there is again a complete change to sheep and goat, followed by desertion of the cave" (Mellart 1975, 209).

The above-mentioned details clearly show that in the Caspian sites we have three kinds of evidence: First, the rhythm of climatic oscillation accompanied with the similar rhythm in the selection of game-animals during the last stages of the Pleistocene.

Secondly, the directional changes in the selective process of animals (for hunt to begin with, and to domesticate later on) was from gazelle to sheep and goat.

Finally, the change in Caspian,

from Mesolithic to Neolithic, was confined to domestication of certain animals and, the production of some crude pottery; neither house-building activities accompanied it nor the production of painted pottery, and a host of other antiquities. A few clay cones from the Hotu Cave, which Masson quotes in favour of Djeitun types, have a very limited bearing on the problem of the formative stage of the Djeitun Culture.

The alternative which we may now consider falls in the theory of local development of the Djeitun Culture. There have been two major objections against the purely indigenous theory : first, the Djeitun Neolithic does not fall in the primary stage of neolithism as has been ideally visualized by Braidwood on the basis of archaeological discoveries made in northern Iraqi mountains—mainly the Zagros and its extension in Elburz at sites like Shanidar, Karim Shahir, M' lefaat, Jarmo (lowest levels) and sites in Kermanshah district in Iran, such as Tepe Asiab, Tepe Sarab and Ganj Dareh Tepe. Secondly, the Djeitun Neolithic has yielded a kind of hand-made painted pottery (Plate I) like of which has come from sites such as Yarim Tepe, Tureng Tepe and Sialk. The obvious conclusion drawn from these two observations has been as follows :

The Djeitun Neolithic represents a developed stage in the *process* of neolithism in Western Asia and, therefore, has some strong possibility of its being generically connected with the West Asiatic (Zagros-Elburz) *process* in which sheep-goat domestication, wheat-barley cultivation, pottery-making open-air habitation, artificial irrigation (to begin with, by bunding the main channel) exchange trade, etc., had already a long history. Accordingly, the Djeitun Culture will represent the northern-most extension of the north Iranian Neolithic Culture as also the eastern-most end of the north Iraqi culture-process. Let us examine it more critically.

To begin with, one has to determine first the orbit in which the process of Zagros Neolithism had travelled. And second, which are the north Iranian sites, falling in this orbit, where Djeitun type material is found ?

The starting point will naturally be the exact cultural phase of Zagros Neolithic which will correspond with the earliest phase of Djeitun; or even slightly earlier. Masson takes it to be represented by pottery phase of Jarmo (*i.e.*, the latter half represented in the upper one-third of the 7 m deposit). To this may also fall level III of Tell-es-Sawaan in the Tigris basin (a far removed site) and a few other sites of the 6th millennium B.C., although both at Jarmo and Tell-es Sawaan we have much more elaborate habitations of multi-roomed houses. Tosi quotes E.O. Negahban and R. Moustafi's chalcolithic site of Tepe Zageh near Qazvin where Jarmo type material has been found. That is the north-eastern-most known site of Zagros neolithism. Ali Kosh and Tepe Sabz in Deh Luran Plain are the south-eastern-most sites which may be taken to belong to the Karim Shahir-Jarmo process. In effect it brings back the concept of Fertile Crescent.

There is, therefore, a big space gap between the Djeitun sites and the Iraqo-Iranian sites of pre-Djeitun and early Djeitun times. Strangely enough, not many sites of Neolithic complex have come to light even between Caucasian sites and south Turkmenian sites. In fact the Elburz is the dividing line north of which is the Gorgan Valley and south of which is the Tehran Oasis. The Zagros culture-process, which seems to have travelled through Kermanshah (Tepe Sarab) to Deh Luran Plain (Ali Kosh), does not appear to have crossed the Elburz, and, therefore, the Gorgan Valley holds the key of the problem. The valley stands as the gateway to south Turkmenia. Here sites like Yarim Tepe and Tureng Tepe have some definite evidence of painted pottery which is analogous to the Djeitun in painted designs (neither shapes, nor fabric) but that hardly solves the main problem: In what lies the proto-Djeitun or Early Djeitun? A site contemporary with Djeitun can hardly help us; we need to know a site earlier than that. And here we have failed so far. The Gorgan Valley has to be re-explored. We are likely to get some early stage of Neolithism. If we get that, our problem is solved, otherwise we will be invoking only theoretical models to explain away a situation only to our individual satisfaction. It is basically an archaeological problem and only spade should answer it. The evidence of sites like Yarim Tepe and Tureng Tepe establishes only the extension of Djeitun Culture in the Gorgan plains since it belongs to phases II and III of Djeitun Culture and not I. But even if we agree with Sarianidi (1971) that Yarim Tepe has material analogus with Djeitun I, it does not fully solve the problem. It may at best show that the epicentre of the Djeitun Culture was in the Gorgan Valley from where it travelled to south Turkmenia, it will hardly explain the circumstances in which the birth and early growth of the culture lie. Sarianidi (1971) has been conscious of this difficulty although he could not spell it out categorically.

Tosi brings in the factor of Pied-mont ecology which characterized the Djeitun sites and some sites of that character in the Turkmano-Khorasan mts. such as Tepe Sang-i Chakmak. Mellart also accepts it. Both of them have quoted David Stronach's personal views in the matter. The site, with a number of tepes, near Bastan, eight kilometres from Shahrud, situated on the southern slope of the Elburz was excavated by Seiichi Masuda. It has yielded the evidence of pre-pottery levels as well as Sialk I-II. Tosi observes that it 'points to promising chances of determining a local *facies* which is culturally intermediate between the Caspian Mesolithic and Djeitun.' We also feel that somewhere in this region—the Gorgan Valley-Khorasan mt.—there may lie hidden the formative phase of the Djeitun still the site quoted by him does not explain the situation, since while Sialk I-II represent a late stage of Djeitun (in fact, the early stage of post-Djeitun), the practically aceramic level Sang-i Chakmak is far removed from Djeitun I. We have to locate a site with early pottery, somewhat like the Soft Ware of the Jarmo type. In any case, let us recapitulate the results of excavations at Sang-i-Chakmak.

At Sang-i-Chakmak, the Japanese Mission (Masuda 1974) probed two tepes, in 1971 and 1973. The West tepe is only 3 m. high with five levels, called 'layers' by the excavators. In each level lime-plastered and beaten floors, frequently stained red, have been encountered. Building No. 1 has both the types of floors and the oven is set on the unplastered floor.

Rooms with lime-plastered floors are of two types : one, in which the floor is a little lower in the centre than the sides ; and two, in which one floor is generally larger than the opposite floor and has equipment of some kind of bed or chair.

According to the excavators, there are two different types of buildings. The one with the fire-place is about 1 m square. The walls of that place having being burnt, it seems to be a kind of hearth. In the opinion of the excavators, the hearth was not meant for ordinary cooking, it was 'a holy place to keep the fire in the house'.

Another type of building with plastered floor has no fire-place but a small room with higher plastered floor. And from such a small room in the second layer some clay figurines, mother goddess and zoomorphic, were found. This is also considered a holy place for offerings.

These details clearly show that here we are dealing with a situation comparable with the late phase of the Djeitun Culture since the early phase is completely devoid of religious structures. But, curiously enough, this complex is practically devoid of pottery (in the first season of excavations not a single sherd was found and, therefore, it was called 'aceramic'; in the second season only one sherd was found that too only from level 3. The area excavated was also not small, it covered some 300 sq. m.) while late Djeitun is extremely rich in plain and painted pottery. However, associated with these floors are some of the antiquities which resemble Djeitun and other complexes—bone spatulas and pins, flint blades and microliths, flint cores and obsidian blades. The shape of the clay figurines—mother-goddess and zoomorphic—is simple, in stylized patterns. It may, however, be noted that obsidian was absolutely unknown in the Djeitun Complex. It, therefore, appears that Sang-i-Chakmak falls in the group of sites which exchanged obsidian in Caucasia, Iraq and Iran. Level 2 of this tepe is dated to 5850 B.C. by $^{14}$C method.

Let us now consider the results of excavations conducted on the East Tepe. It is bigger than the western tepe, about 6 m in height with six levels or layers. The houses found between the second and fifth level have rectangular plan. Each house had a courtyard and near the courtyard or inside them were set the kilns. The walls were thick and each clay-brick measured about 70 cm. in length with an oval section of 20 cm. It may be pointed out that it was most unlike the Djeitun planning since kilns have never been found in the courtyards of those sites.

The pottery from this site is found decorated in red-brown paint on cream or reddish ground with horizontal and vertical parallel lines and other geometric patterns. The body is tempered with chaff and made by the ring building technique. There is some difference between the upper and lower levels. For example, the painted pottery with zoomorphic designs and unpainted rough pottery, such as the 'threshing-tray', which have been discovered in the upper levels, are not found in the fourth and fifth levels.

The other associated antiquities included the so-called cosmetic implements in clay and stone, bone spatulas and pins, polished stone-axes and flint blades and geometric microliths. Seiichi Masuda (1975), the excavator, observes, "these above mentioned objects are similar to that of the Djeitun Culture in Soviet Turkmenistan. And Mr. David Stronach found the same materials at Yarim Tepe, near Bunbad-i Qabus in 1960. The data of the East Tepe may be contemporary with these cultures, and also Sialk II. In addition to above mentioned finds, interesting sickle-shafts with lovely animal decoration have been found from the fourth and fifth layers of this site."

Obviously, we are dealing here with Sialk I type culture which represents the late stage of the Djeitun Culture.

On the surface of the mound a few burials with Sialk II pottery have been found.

Thus, Tosi (1973-74) does not appear to be correct when he sees in the West Tepe a situation in between the Mesolithic and early Djeitun.

Mellart (1975, 47), on the other hand, has taken a reasonable stand about the remains found on the eastern tepe. He observes, "Levels 4-6 clearly belong to early (and middle 7) phases of the Jeitun culture having the same painted pottery, stone industry with microliths, small objects and bone sickles. New is the fine naturalistic darwing of fox, wild cat and lizard figures on the end of the sickle hafts. Brick houses have open courtyards with kilns and oblong rooms divided by cross walls into several chambers, differing from the standard square plan of the Jeitun Culture. Walls are painted black or red. The excavations at this site show that Jeitun culture is probably the eastern equivalent of Siyalk I, and is now also represented on the Iranian plateau."

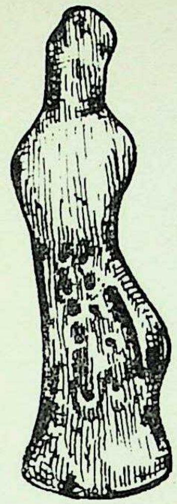
Sarianidi (1971), however, feels that some tribe from Iran (Kermanshah?) moved into the Gorgan Valley during the Mesolithic times, cross-fertilized with the Caspian Mesolithic and gave to the so far unknown phase of neolithic immediately preceding Djeitun. But this is equally a conjecture based only on intuition. Where is the archaeological clue for it ?

However, one may legitimately question the validity of the Evolutionary Model we are all (Tosi, Sarianidi, myself) trying to invoke to understand the beginning of Neolithism in south Turkmenia. Why not inplosion theory be invoked and direct change from Mesolithic (Caspian) to Neolithic (Djeitun) be accepted? The reason for our rejection of the implosion theory rests squarely on the fact that the distribution areas of the two complexes differ from each other not only in space but also in the general ecological setting which, in effect, means two different patterns of man-land-animal relationships. It may, however, be reiterated that it does not at all reject the acceptance of the usable technological *heritage* by the Djeitun people. As a matter of fact, throughout the history of Neolithism in West, Central and South Asia microliths played a very important role. Microliths continued even in Chalcolithic. It could be removed only in the urban setting. But let it be clearly understood that Microlithism is not Mesolithism, the former is purely technological with its own internal developmental-stages, while the latter is a cultural stage. In that sense, the Caspian Mesolithism was far removed from the South Turkmenian Neolithism. The technological link between the two seen in microliths, therefore, means very little in the context of our problem in hand. We beg to differ from Masson (1961) in this regard. To us, Sarianidi

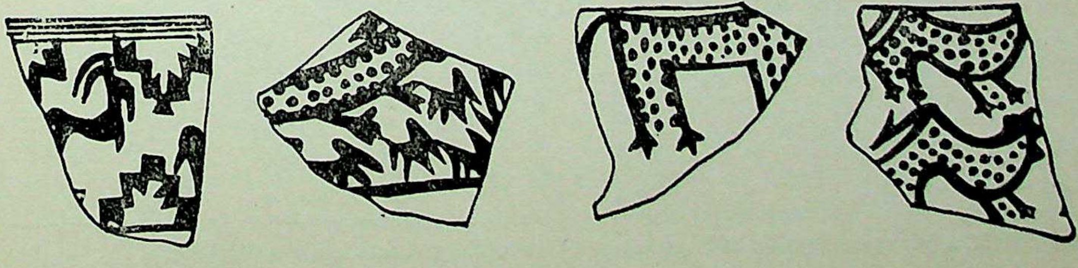
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

(1971) also relies too much on Yarim Tepe and Iranian tribal movement in pre-Djeitun setting although his emphasis on Gorgan Valley as the most potential area holding the key of the problem is fully justified. Tosi (1973-74) is wavering between the 'indigenous' and 'diffusionary' models although he leans towards the former and to that extent acceptable to us. Mellart is, however, more balanced in his views to the extent that he does not go much beyond the archaeological evidence and accepts Sang-i Chakmak evidence no better than the evidence from Yarim Tepe or Tureng Tepe. In fact, Masson (1961) published a chart (see p. 58) in which Djeitun has been clearly placed in pre-Sialk I context. Sarianidi (1971, 309) also concluded in somewhat similar terms : "It was not the Mesolithic of Caspian region but the pre-Ceramic culture and the ancient Turkmeno-Khorasan mountains that served the basis of the Djeitun culture". Even though we may not subscribe to these views completely, in the ultimate analysis we view the problem in the frame-work of the Evolutionary Model proposed by Braidwood, but also modify that by rejecting the 'diffusionary' aspect of that model and introducing the concept of 'local change and development'. It accepts diffusion from neighbouring regions only as an stimulant factor, not always easy to locate in archaeological records. Thus, to us, so far there is absolutely no evidence of the formative period of the Djeitun Culture anywhere—neither in Turkmenia, nor in Iraq, nor in Iran. We have, to be true to the archaeological evidence in hand, no specific material from Iran or Iraq which is comparable with the early phase of Djeitun. We have, however, ample evidence from Gorgan Valley (Yarim Tepe) through the Elburz's southern slope (Sang-i-Chakmak) to the Kashan Oasis (Sialk) which establishes the fact the around 5500 B.C.-5000 B.C. bracket, which corresponds to the Middle-Late phase of Djeitun Culture, a culture-contact situation developed on an intimate level between south Turkmenia and northern Iran. It resulted in the production of various characteristics in settlement pattern and movable antiquities which were shared in everyday life by the peoples of Djeitun-Sialk culture-area. From now onwards culture interaction between south Turkmenia and northern Iran became a repeated feature of the cultural dynamics of the region.

While all these observations are made we are conscious of the fact that 'neither the fertile upland valleys from Meshed to Bujnurd nor the region between Sabzvar and Nishapur to the south, rich in copper and turquoise, have yet yielded any Neolithic or earlier site in spite of exploration.'



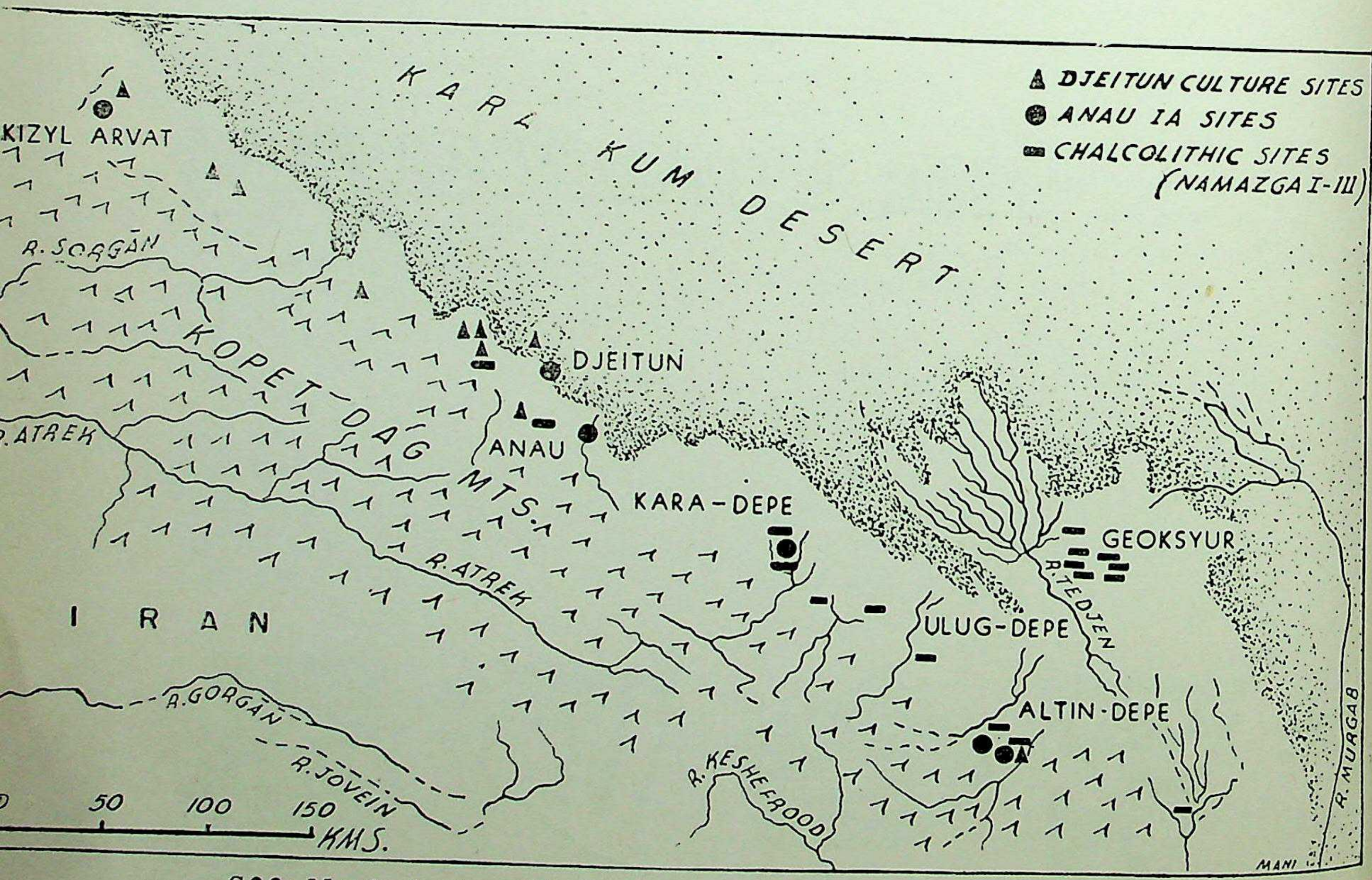
# THE CHALCOLITHIC



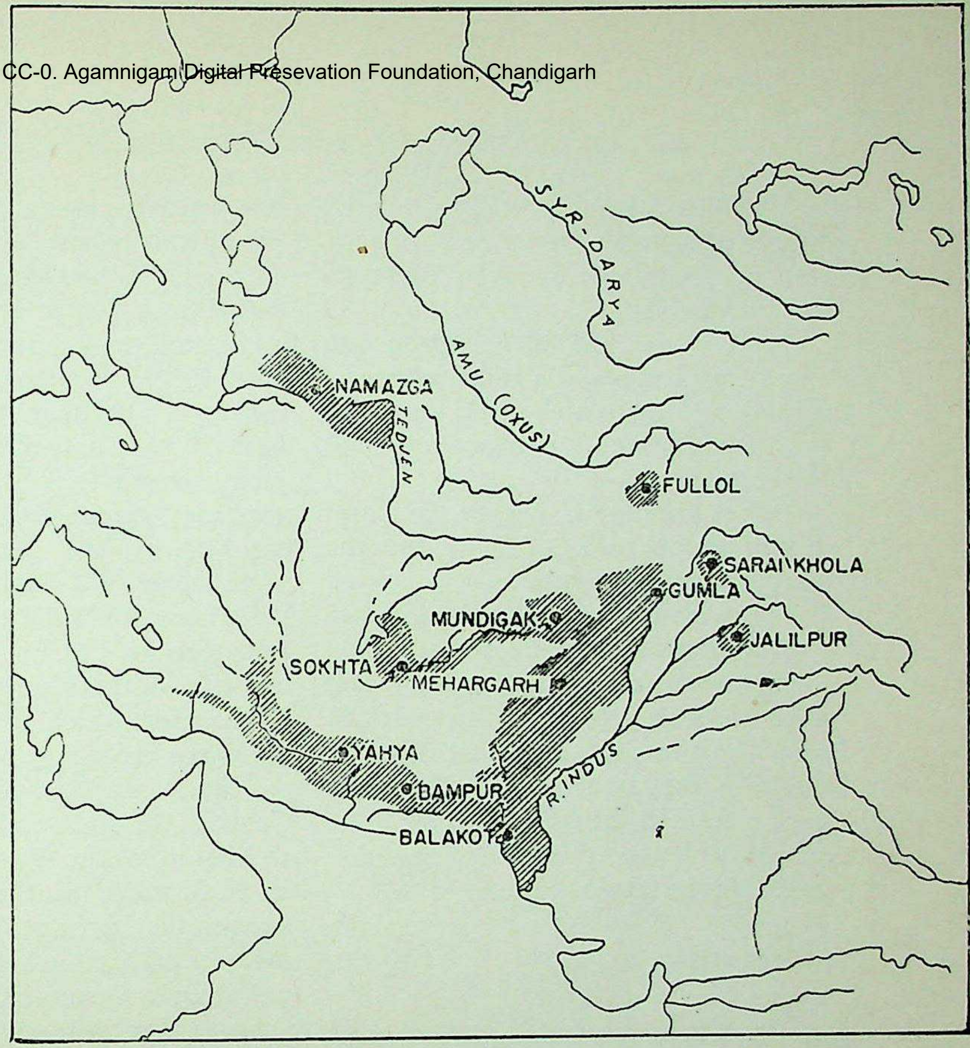
S.2.1↑
S.2.2→

S.2.1=Terracotta female figurine from Dashlidji-Depe, Namazga I times

S.2.2=Painted pottery from Kara-Depe, Namazga III times


▲ DJEITUN CULTURE SITES
● ANAU IA SITES
▬ CHALCOLITHIC SITES (NAMAZGA I-III)
KARA KUM DESERT
KIZYL ARVAT
R. SORGAN
KOPET DAG MTS.
DJEITUN
ANAU
R. ATREK
KARA-DEPE
GEOKSYUR
R. TEDJEN
ULUG-DEPE
ALTIN-DEPE
R. MURGAB
IRAN
R. ATREK
R. GORGAN
R. JOVEIN
R. KESHEFROOD
50
100
150
KMS.
MANI

S.2.3a. Map showing sites of Neolithic and Chalcolithic cultures in south Turkmenia



**S.2.3 Map showing major areas of chalcolithic cultures**

ONE OF THE most fascinating aspects of the study of early sedentary cultures is the process by which the effective use of metal (copper, to begin with) comes into vogue and then leads to a chain reaction in different fields of human activities. It is fascinating because in most of the examples in Asia Minor and West Asia the first tools, simple as they were in the Neolithic context, were either imported or the metal ore was brought from a distance of which we are not always sure. But at that early stage metal could not bring about any appreciable change in the culture-pattern. However, once the metal objects multiply, which obviously took some time, they bring about a new economic order in which intensive trade and commerce open a new chapter. Gordon Childe (1957) visualized the following links in this chain reaction :

(i) It gave to the people more efficient means of production (such as the plough and the wheel) and implements of destruction (such as the saw).

(ii) Two theoretical sciences which can be traced back to practical sciences originated. They are (a) the transmutation of ores into metal by heating them with carbon, and (b) systematic prospecting for metal.

(iii) Organized international trade was initiated as a result of the need for the import of metal.

(iv) The demand for a regular supply of metal evoked a new population of whole-time, non-food-producing specialists.

(v) This again involved production and accumulation of a relatively great surplus of food, which could be made available to metal prospectors and workers.

(vi) A totalitarian regime, such as that of the pharaohs of Egypt and the temple-priests of Sumer, was required and grew up to channelize the surplus.

But this is the picture of an urban society which emerged at a very late stage of Metal Age in a few selected areas of the Orient. Before this, in most of the areas, the early metal stage remained subservient to the lithic industry of the preceding neolithic stage. Hence, chalcolithic.

### Periodization

The Chalcolithic of Central Asia covers the fifth, fourth and third millennia. Its main areas of concentration was south Turkmenia—in the oases and river deltas along the northern foothills of the Kopet-Dag chain of hills and the Geoksyur region. The type-site is Namazga-Depe where a sequence of five periods of human occupation, from Chalcolithic to Bronze Age, has been worked out. The Chalcolithic covers the first three periods—Namazga I to Namazga III (Fig. 2.1).

The area of concentration of the Chalcolithic sites has been divided into three zones : the Western—from Kizil Arvat to Ashkhabad, the capital of Turkmenia, with its type-sites at Koushut and Anau; the Central—from Anau to Dushak with its type-sites Kara-Depe and Namazga-Depe, and the Eastern—from Altin-Depe and other sites in the lower courses of Chaacha-Sai and Meana-Sai rivers to the delta of Tedjen river, with its type site Geokeyur I. Thus, Koushut, Anau Kara-Depe, Namazga-Depe and Geoksyur are the major representative sites of the Chalcolithic culture-complex of south Turkmenia. All of them are now approachable by train because the railway line passes through the same fertile flat land running along the narrow corridor between the northern foothills of the Kopet-Dag mt. and the southern edge of the Kara-Kum desert which alone was inhabitable in the protohistoric period also.

The story of the discovery of the Central Asian Chalcolithic goes back to 1904 when R. Pumpelly, followed by H. Schmidt (Pumpelly 1908) made a systematic attempt to excavate the mounds of Anau which was only casually dug by General Komarov some 25 years earlier, in 1880. These American excavators divided the whole deposit into four periods, I to IV ; Period I was, however, divided into two sub-periods or phases—IA and IB : with numerous projections in the walls for living purposes, which was undoubtedly an elaboration over the Djeitun house-plans. In a number of examples, the floors and the walls were painted red as was done in some of the Djeitun houses also. Were they the ritualistic rooms? The pottery was a mixture of red and buff wares, tempered with grass, and well-fired. Hemispherical bowls with flat or concave base formed the main type. The decoration, usually of hatched triangles and slanting lines, was applied in black pigment. It completely contrasted with the Djeitun designs which were dominated by wavy lines and brackets. The flake and

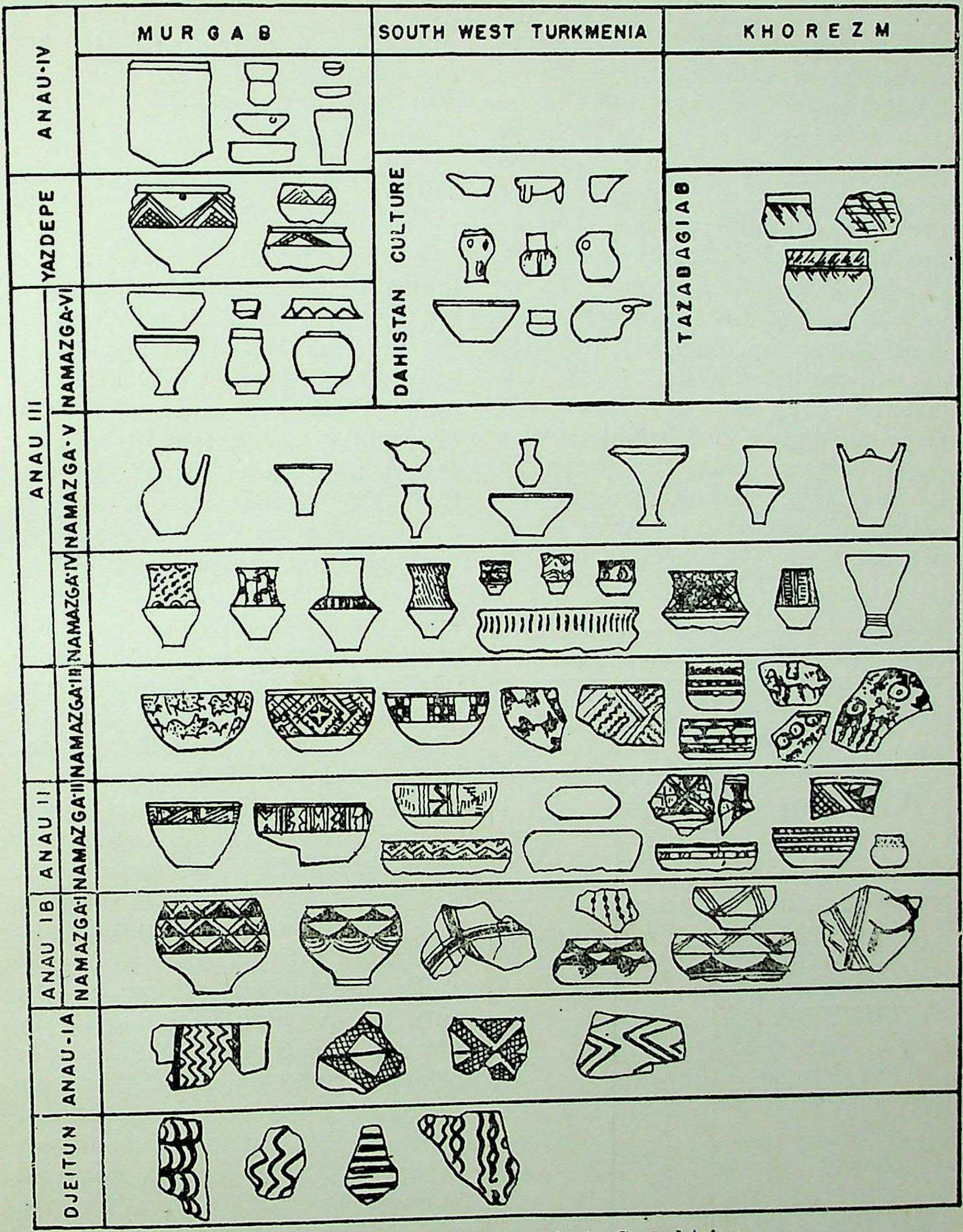

MURGAB
SOUTH WEST TURKMENIA
KHOREZM
ANAU-IV
YAZDEPE
ANAU III
NAMAZGA-VI
NAMAZGA-V
NAMAZGA-IV
NAMAZGA-III
ANAU II
NAMAZGA-II
ANAU IB
NAMAZGA-I
ANAU-IA
DJEITUN
DAHISTAN CULTURE
TAZADAGIAB

**Fig. 2.1. Protohistoric cultures of Soviet Central Asia as represented through their pottery.** *After Masson*

blade implements of white flint include sickle bladelets, burins and borers; the geometric shapes were rare. The domestic implements include a large number of stone mortars and pounders as also querns which characterized the Djeitun Culture. Amongst the polished-stone tools, chisels (it was a new type not in use previously) and hoes or mattocks are prominent, the mattocks being found for the first time. Terracotta spindle-whorls are found in large numbers. In Djeitun culture, it may be mentioned, weaving is attested but not the spindle whorls which increases production on the Late Djeitun site of Chagalli-Depe. The copper objects include heavy awls, piercers and double-bladed knives, which were not known earlier. On the whole, the material equipment at Chakmakli-Depe was limited but belonged to a stage higher than the preceding Djeitun Culture. According to the one scheme of periodization Anau IB is equated with Namazga I; II with Namazga II, and Anau III with Namazga IV-V-VI, after which the Iron Age starts (Fig. 2.2).

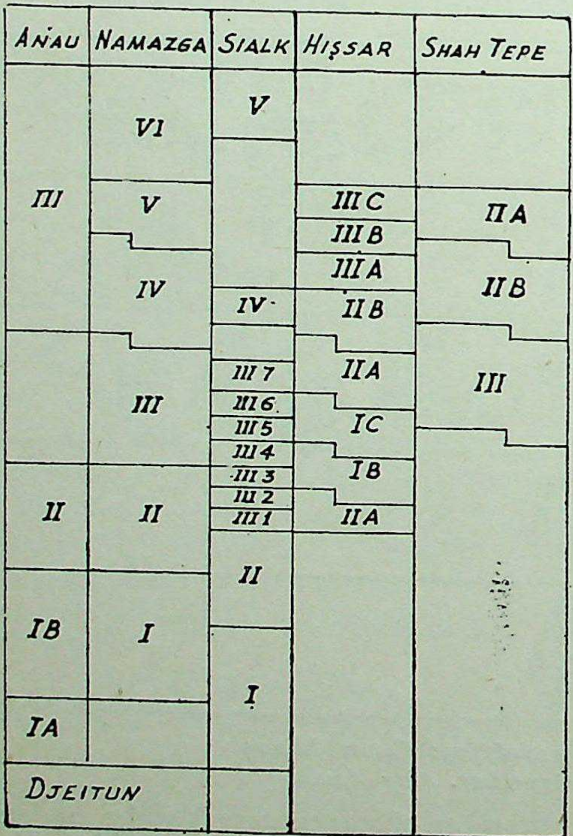


**Fig. 2.2. Comparative stratigraphy of Turkmenian and Iranian sites.** *After Masson*

## PROTO-CHALCOLITHIC CULTURES

In recent years a new development in this scheme has taken place. It is the discovery of an early chalcolithic culture which forms a link, albeit weak, between the neolithic Djeitun and the chalcolithic Namazga cultures. For want of a better term, it is called Pre-Anau Culture, reminding us of terms like Pre-Harappa Culture in the Indian context which is only an apology of a proper terminology. It is the Proto-chalcolithic Culture. There are two main sites where this phase of culture has been marked—Chakmakli-Depe and Mondjukli-Depe, both of them are located near the village known as Chaacha, in the Eastern region of sub-montane area of south Turkmenia. The Chalcolithic of Central Asia, therefore, begins with Proto-chalcolithic Pre-Anau Culture, followed by Anau Ia Culture, which in turn was followed by Namazga I to Namazga III (Fig. 2.3).

Here a caution may be given. The term 'Pre-Anau' has been used by Masson and Sarianidi (1972) for a culture-complex which is distinct from the Anau Ia and Namazga Complex. It has its own developmental history in which the entire complex does not appear to belong to the pre-Namazga cycle. Starting in the pre-Namazga times, it certainly co-existed in the Namazga times. The exact chronology of the pre-Namazga cultures has yet to be worked out but its cultural details are known fairly well.

## Pre-Anau Culture

### CHAKMAKLI-DEPE

The type-site which has yielded the fuller picture of the culture is Chakmakli-Depe, measuring 80 and 60 m. in length and breadth and a little over 1·5 m in height. It has a total deposit of 2·85 m, including 50 cm. flood deposit intervening Levels IV and V. At Chakmakli-Depe (Berdyiev 1968) the lowest level, Level-5 of Building Period I, has yielded flake tools, charcoal pieces and a few fragments of copper implements, but, significantly enough, not pottery. This is absolutely unlike any other known complex in Central Asia. The next level, Level-4, has, however, yielded a beautiful handmade painted pottery (Fig. 2.3a) which is also of a unique kind, but along with other materials of the earlier type. The succeeding levels have yielded floors decorated with red-ochre wash, a practice which was in vogue in earlier times (Djeitun Neolithic) as well.

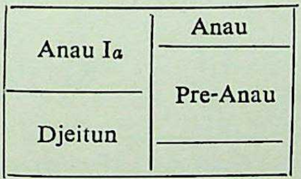


**Fig. 2.3. Showing the position of Anau and pre-Anau cultures.**

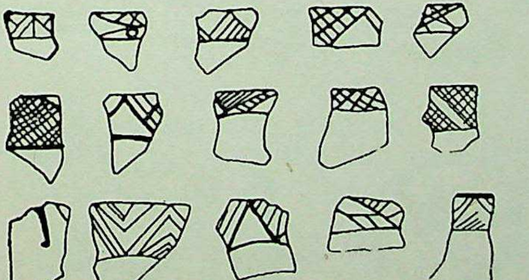


**Fig. 2.3a. Painted pottery from Chakmakli-Depe**

Belonging to the Building Period II or Level IV, planned settlement of over 30 living and working areas appeared at the site. Flanking the central street, houses of regular rectangular mud-bricks 50 × 20 × 10 cm size were constructed. These were one-room houses of two types : small room with a hearth in a corner almost like the Djeitun houses and slightly large elongated room.

### MONDJUKLI-DEPE

At Mondjukli-Depe also, the excavators have found the remains of the pre-Anau (Mondjukli) Culture. It was, however, confined to the upper levels, the lower levels have yielded the material of the Djeitun (Neolithic) Culture. There was an overlap between the two. Here also the characteristic pottery, terracotta objects and stone and copper implements have been found in one room-houses arranged on either side of a central street.

### KOUSHUT

East of Anau is the site of Koushut whose pottery has been unlike Anau IA but nearer to Chakmakli and Mondjukli. It is decorated with geometric forms filled with cross-hatching. The other domestic objects include terracotta spindle-whorls and a heavy copper awl. Obviously, it represents the middle-late stage of Mondjukli Culture. On the Pre-Anau (Mondjukli pottery, which is marked by geometric linear patterns, a large number of theories have been built which mainly concern its origin. That the culture-complex does not fall in the unilinear evolutionary model of

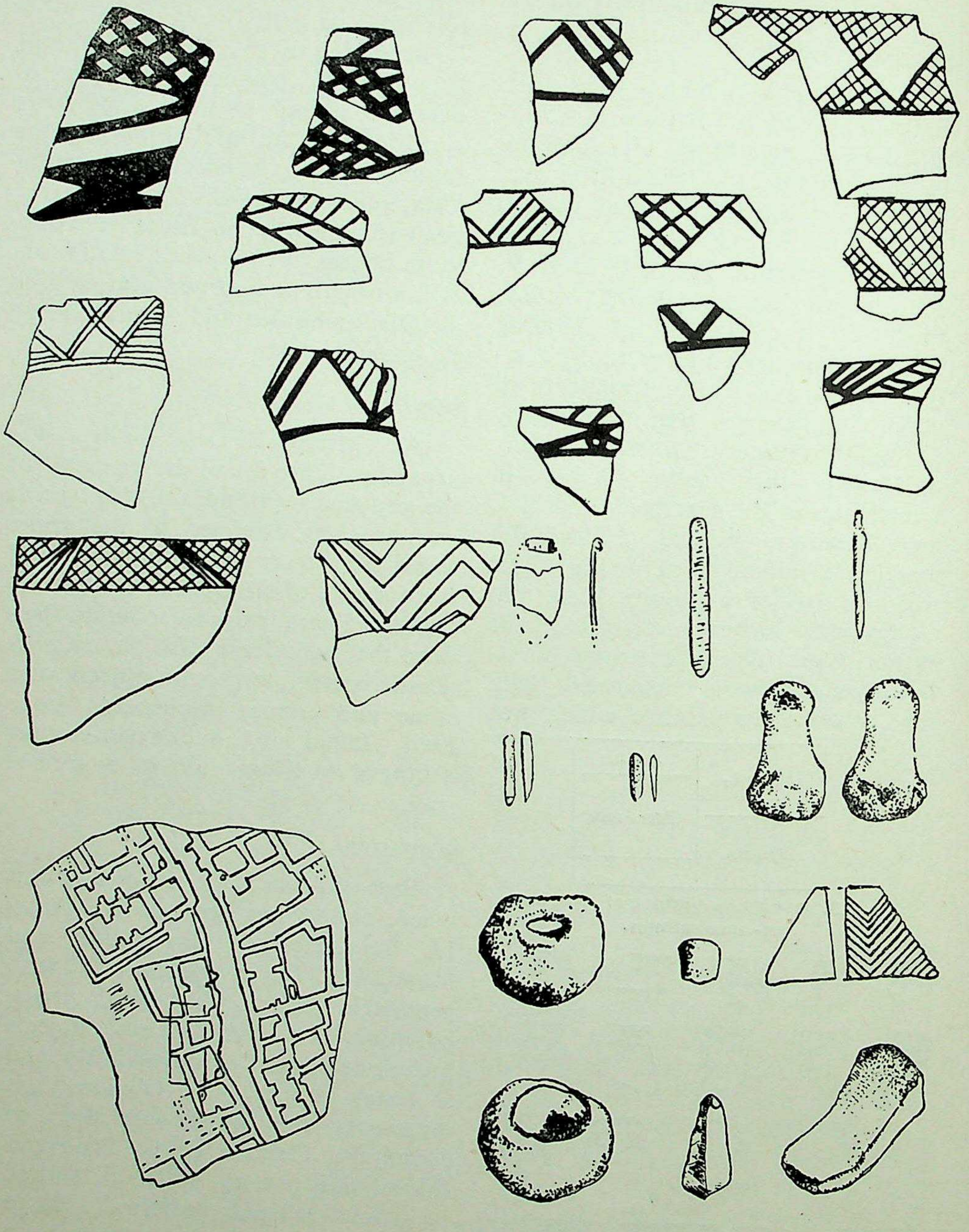


Fig. 2.13 (b) Culture-complex of Early Chalcolithic times at Chagalli-Depe. 1-15 painted pottery; 16-18 copper artefacts; 19 stone mattocks; 20 ceramic distaff; 21-21 stone tools; 28 part of the planimetry of the site. *After Sarianidi*

development of the preceding Djeitun Culture, is absolutely clear from the culture-complex. But, then where lie its roots? Masson and Sarianidi (1972) feel that it is located in north-central Iran. They specifically mention the 'Standard Ware' of Hassauna IV-V, and Sialk I.3 pottery-designs, the latter being very much similar to the former. But when did the Sialk I.3 move into south Turkmenia? At Mondjukli-Depe, as said earlier, the lower levels represent the middle phase of the Djeitun Culture which clearly overlap with the early phase of Pre-Anau cultural milieu. The situation is very much similar to pre-Harappan pottery overlapping with the Harappan at Kalibangan in India. It has, therefore, been suggested that in the fifth millennium B.C. there occurred a considerable movement of people in northern Iran 'which may have impinged on the fertile valleys of south-eastern Turkestan.'

In this connection what is most significant to note is the introduction of copper tools and copper technology in south Turkmenia. For this, migrating Iranian tribes have been credited, because of two reasons : first, the Kopet-Dag hills have no copper-ore deposit, and, secondly, Sialk I was certainly one of the oldest centres of copper-smelting technology. We are, however, not sure whether the tools were imported or the copper ingots were brought in, possibly both; to begin with, at least. In this context, it is extremely significant to note that the copper objects of the Pre-Anau culture-complex include not the ornaments but tools, almost exclusively, such as knives, awls and piercers. It has also been observed that although some kind of weaving originated even in the Late Djeitun times at sites like Chagalli-Depe, yet terracotta spindle-whorls were not there. Obviously, the developed form of weaving technology came with the new comers, from Iran if we accept the theory proposed by Masson and Sarianidi.

It may, however, also be mentioned that the cultural traits of the Neolithic Djeitun continued to dominate the overall scene of the pre-Anau villages —in hearths, walls, floor decorations, etc.

For this Pre-Anau culture-complex Sarianidi (1971: 299) has suggested the name Mondjukli Culture, after the type-site of this culture, to avoid confusion existing at the moment. In India we are using the term 'Sothi Culture' for the Pre-Harappan culture-complex for similar reasons.

## DISCUSSION

The problem of origin of the Proto-chalcolithic Mondjulkli Culture which preceded the Namazga sequence has been bothering the minds of scholars as much as the problem of the origin of the Djeitun Culture. In the framework of the diffusionary model, a product of what Lamberg-Karlovsky calls 'the exocentric tendencies' (1973 : 43-46), adopted primarily by the Soviet archaeologists, (Masson and Sarianidi 1972 : 51; Sarianidi 1971 : 299) the Mondjukli Culture was brought to south-eastern Turkmenia by the migrating hordes of people originating in the Kashan Oasis, to be exact, Sialk I.3. In Iran of the 5th millennium B.C., fairly important population-shifts linked to the migration of tribes of the Hassuna cycle can be observed. The distant repercussions of this process reach even to the plains

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

at the foot of the mountains of south-east Turkestan (Sariandi, 1971 : 299; Dyson 1965 ; 218). Since Sialk I.3 itself is supposed to have originated in Hassuna IV-V (Standard Ware), the roots of Mondjukli Culture are taken to have gone further west in the lowlands of Mesopotamia. The basis of this reconstruction, it may be pointed out, is painted designs on, pottery and not pot-shapes. The designs include only geometric patterns, such as groups of oblique lines, hatched triangles, herring-bone design, mesh and criss-cross patterns. We agree with Mellart (1975 : 217) that 'similarity with that is undoubtedly fortuitous. The rather simple pottery does not compare with the sophisticated designs of Anau IA and is obviously not derived from the earlier Ware.'

A group of painted designs identified with a definite group of people has been a very old past-time with archaeologists. In their enthusiasm they often do not consider formal and functional aspects of individual types of pots, differing ecological settings, distances involved, associated movable and immovable antiquities, etc. Do people migrate even when there is no valid reason to migrate ? Do people migrate only with painted designs leaving behind everything, including the shapes of pots ? All this is doubtful.

The Mondjukli Culture is known only from three sites, two located in the eastern part of south Turkmenia, Chakmakli-Depe and Mondjukli-Depe and one located in the Central part of south Turkmenia, Koushut. Obviously, the Gorgan-Valley route for the so-called Sialk I.3 people is somewhat ruled out—the thoroughly explored western foothills of the Kopet Dag mt. and the Gorgan Valley have not yielded any trace of this culture.

The route of the migrating tribes may, therefore, have passed through the region where the modern towns of Nishapur and Meshed are located. It would have then crossed Kuh-i-Hazar Masjid ranges of north-eastern Iran to reach the Kopet Dag ranges where another jump was required to reach sites like Chakmakli-Depe and Mondjukli-Depe, from where it may have gone to Koushut. Unfortunately, nothing tangible is known of Sialk I.3-Hassuna IV—V Standard Ware' in this entire area of hundreds and hundreds of kilometres of desolute landscape. What then is the guarantee that the roots of Mondjukli Culture lie in Sialk ?

There is one more difficulty. Of the three Mondjukli sites, Chakmakli-Depe is most elaborate and rich, in structures as well as in antiquities. This is also the most ancient one amongst the three; the Mondjukli site giving evidence only of the latest phase. Strangely enough, the lowest level of this site, level V, is aceramic, yielding only charcoal, flint chips and a few fragments of copper. It reminds us of the situation existing at Sang-i-Chakmak, dealt with earlier in the context of Djeitun Culture. It is only the next higher level, the IV, which yielded the typical Mondjukli pottery—well fired and decorated with intricate linear patterns. Now, what does it mean ?...Who were the Chakmakli V people ? The Djeitun people ?—No evidence for it. The Iranian people ? No evidence for this. Some local nomadic people ?...May be, but we do not exactly know. Against this, an argument is given which is worthy of serious consideration : as has already been pointed out, the Kopet Dag hills have no copper at all while Sialk is known for a developed copper—smelting technology from very ancient times, from period I itself. It is, therefore, some what reasonable to conclude that the copper technology was brought to south Turkmenia by the Sialk or any other Iranian people. But when did it happen ?... In the latest phase of Djeitun (Phase III) we have the evidence of copper fragments. At Mondjukli-Depe we have definite archaeological evidence to show that there was an overlap between the Neolithic and the Proto-Chalcolithic material, which, in terms of human population, will mean co-existence of Djeitun (Middle Phase) and Mondjukli (Upper Phase) people. Since at Mondjukli-Depe, the Mondjukli Culture is represented by its late phase, the logical conclusion is that for quite sometime, in the latter half of the sixth millennium B.C., south Turkmenia witnessed two cultures, existing side by side—the Djeitun and the Mondjukli—with overlap between them at the late stage. As has been said earlier, those familiar with the situation of the Pre-Harappan Kot-Diji—Sothi culture-complex *vis-a-vis* Harappa Culture at sites like Kalibangan can easily appreciate the implications of the archaeological evidence from south Turkmenia.

We may, therefore, reconstruct the picture as follows :

While the Djeitun neolithic culture was passing through its Middle phase, around 5500 B.C. and later, it acquired some copper objects from Iranian sources, of which, of course, not many examples have survived. Some aceramic group of people during this very period acquired the knowledge of copper technology or copper tools at Chakmakli-Depe (level V), far away in south-eastern Turkmenia. Soon after, they are found using a kind of painted pottery (Level IV) and developed types of copper artefacts. After some time they occupied a Djeitun site —Mondjukli-Depe—where the two groups of people lived together for quite some time. During this period the western site of Koushut was also occupied. Eventually, the Djeitun Culture was absorbed in the Mondjukli Culture.

In this picture the missing link is Level V of Chakmakli-Depe which, on the present showing, is aceramic. If tomorrow it also turns out to be 'ceramic', of Sialk I.3 type, well and good, otherwise Level V of Chakmakli Depe should be taken to represent a purely local culture evolved by some tribes.

But, even if it is correct, how to explain the Level IV culture of Chakmakli-Depe ? Does it not represent the emergence of a new culture and a new people in eastern south-Turkmenia? The painted designs occurring on pottery certainly favours the hypothesis of a new culture-complex. But could we not take it just a new fashion developed locally since neither demographic change, nor population shift, nor economic pressure appears to have exerted itself in pushing out a group of Sialk I.3 people to such a far off place as Chakmakli-Depe ? Admittedly, it is difficult to state categorically anything at the present state of our knowledge. Only a little more field-work will throw the required light on this very fascinating subject. It is possible that we get the sites of Early Mondjukli Culture in the western most region of south Turkmenia. But on the present showing no theory can be built on this hypothetical situation. Curiously enough, Tosi (1973-74, 31-32) missed the 'episodic' nature of the situation by stating that Mondjukli-Depe provides 'a significant example of stratigraphic continuity between the late Djeitun phase and Anau IA, even though the material from the culture-complex of the settlement is found characterized by a 'mingling traditional and innovatory elements'. The correct assessment of the Mondjukli Culture must take into account its characteristic pottery, aceramic horizon (Level V) of Chakmakli-Depe, increase in copper implements, houses made of rectangular bricks and arranged along a central lane, increase in the men and domesticated animal population in comparison with the preceding Djeitun Culture but extremely limited number of sites, being only three, and the emergence of an entirely different kind of pottery in Namazga I Culture which succeeded the Mondjukli Culture. We may, however, still suggest Masson and Sarianidi (1972) for further reference.

## Anau Culture

Anau IA complex is pre-Namazga since Namazga I type material starts from Anau IB level. In fact, the cultural milieu of Anau IA is so distinct from that of IB that it is proper to call it as Anau Culture, leaving Anau IB to be called as Namazga I culture.

The Anau pottery is marked by sand tempering, well levigated clay, fine texture, thin walls and well-fired surface. The most popular pot is a drinking cup decorated with large figures having cross-hatched bodies. It is characterized by concave bottom. The pottery is treated with a very fine, thin, light brown or light reddish brown slip. The surface is dull and mat. The paintings have been executed in mat black or mat brown pigment (Fig 2.4).

Pumpelly and others (1908) have divided the paintings into (i) zig-zag band filled with trellis, (ii) simple or oppositely placed triangle, (iii) triangle trellis filled, (iv) broad lines filled with vertical zig-zag lines and (v) rhomboids flanked by triangles.

The Anau pottery has been found only in the lower layers of the north mound at Anau and Govich-Depe, located a little west of Anau, since only at these sites we have the characteristic painted pottery with rhomboids flanked by two triangles.

The Anau pottery of Anau Ia levels, according to Pumpelly, 'cannot, however, have been very far distant, (from Ib) for there are sufficient points of resemblance (between them) to prove their relationship.' In a sense, he is right, but as a whole, the Anau Ware is much different from the Namazga I Ware. According to Mas-

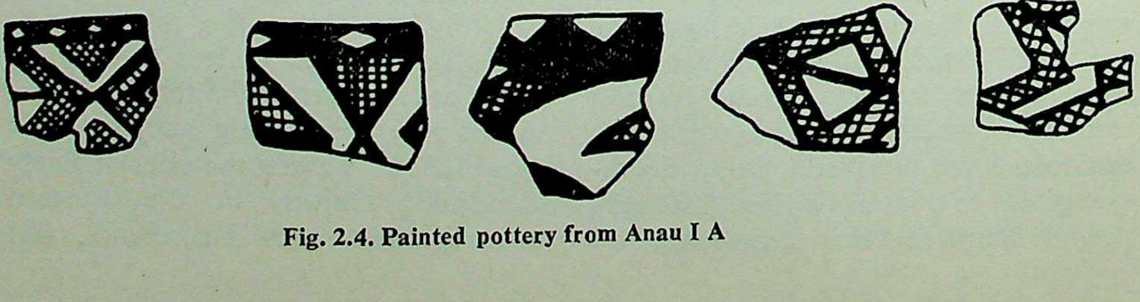


Fig. 2.4. Painted pottery from Anau I A

son and Sarianidi (1972, 5) it is closest to the pottery found at a few sites in the Tehran Oasis in Iran, for example, at Ismailabad and Kara-Tepe, and not Sialk II and Chashma Ali as was once proposed by McCown. But does it mean that Anau I a also represents the arrival of a new people from Iran ? This pottery and people correlation is really not very easy to establish.

## CHALCOLITHIC CULTURES

### Namazga I Culture

With Namazga I (or Anau IB) we enter the stage of real take-over from short-lived complexes to a long-lasting complex. The settlements multiply all along the foothills of the Kopet-Dag mountain with larger covered areas than before. We have about twenty known sites, some in the Central Zone covering as much as 35 acres or even more, with an average optimum population of 2500 people (Fig. M. 2.1). In the Western Zone of the Kopet-Dag region, there are the sites of Anau Depe, Ekin Depe, Ak-Depe, Tilkin-Depe, Ovadan, Dashli, Tokai, Karantki, Beurme, etc. But these sites are usually small, hardly 2·5 acres to 3 acres in area. In the Central

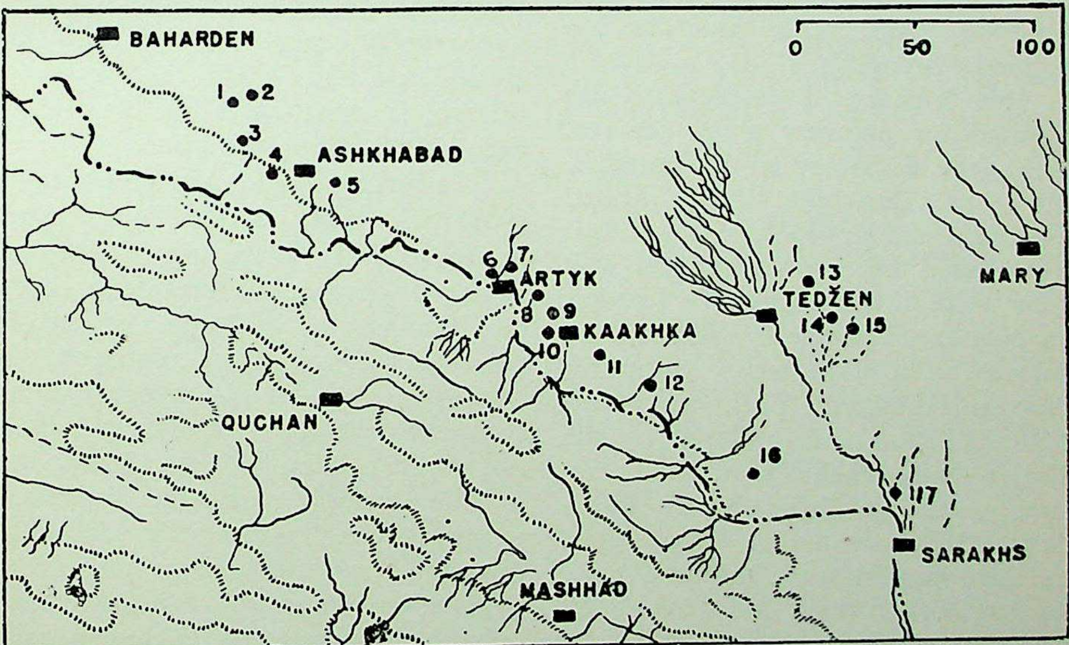


**Fig. M.2.1. Namazga I (Anau I B) Early Chalcolithic Sites**

**1. Iilkin-Depe**
**2. Dashli-Depe**
**3. Elkin-Depe**
**4. Starja-Nisa**
**5. Anau**
**6. Taichanak-Depe**
**7. Kara-Depe**
**8. Gara-Depe**
**9. Yassy-Depe**
**10. Namazga-Depe**
**11. Sarmancha-Depe**
**12. Ulug-Depe**
**13. Dashlidji-Depe**
**14. Geoksyur-1**
**15. Yalangach-Depe**
**16. Iilginli-Depe**
**17. Serahs**

Zone also, however, there are smaller sites of the Western Zone dimensions, *e.g.*, Yassi-Depe and Sarmancha-Depe. The sites of the Eastern Zone are usually small, *e.g.*, Iilginli. Depe is comparatively small. All this shows that the demographic increase was followed by expansion in space. This means the settlement dynamics adopted a directional change in which some habitations grew larger than the others. The population concentration at selected places meant greater exploitation capacity of men in terms of land and animal resources. This collectivism at different levels of production and favourable environmental conditions, *i.e.*, water supply, good soil-cover, intensive agriculture and domestication of animals.

The Namazga I people are also credited for one very great achievement—the discovery of the potentiality of the Geoksyur Valley, located far from the Kopet-Dag mountains. It is around the hundred channel lush green delta of the Harirud-Tedjen that the Namazga I people established their colonies at a stage when culturally they had matured. Their concentration was in two oases watered by the Tedjen—the Sarakhs Oasis, on the upstream, and the Tedjen Oasis, in the delta. Of about half a dozen sites, the most important is Dashlidji-Depe, located in the Tedjen Oasis. Although a small site, it has been excavated fully with spectacular results. The other notable sites in the Tedjen delta are Yalangach-Depe, Akcha-Depe and Geoksyur-1. In the Sarakh Oasis, the sites are very small, just like the shephards' villages, such as Serahs. It appears that it is in the Namazga I times that the transformation of the piedmont slopes and villages in juniper steppe took place which resulted in the formation of a few small sites towards the mountains (before Namazga I Culture actually moved in the Tedjen Oasis) such as Karankly-Tokaj and Kashly-Tokaj in the Karaul and Desht Zones on the watershed of the Kopet Dag.

## POTTERY

The Namazga I pottery of the Kopet Dag foot-hills is a handmade chaff-tempered ware ; some of coarse texture and some of fine. About one third of it is painted with designs like horizontal rows of black or dark brown triangles, zig-zags and chequers ; goats and plants occur only rarely. At Yassi-Depe, a pot-sherd represents an onager. In some examples, paintings occur inside the vessels also.

The pottery from Anau (Pumpelly, 1908) has been divided into two groups—Gr. A, consisting of smaller vessels displaying fine technique, and Gr. B, consisting of large and small vessels displaying coarse technique.

*Group A Pottery* : The most common form is a deep cup with margin without profile ; having a low, flat foot, a little concave beneath. In rare examples one finds a steep lip bent inward. The pottery, in colour, is (a) light red or brown, (b) whitish green or yellowish green, and (c) carmine red or violet. The painted pottery was washed, slipped or plain. Some of them show marks of burnishing.

*Group B Pottery* : (in both the groups) They have been divided into two major sub-groups : (i) horizontal patterns, (ii) oblique band patterns. The patterns of the former group, consisting of separate motifs were arranged in rows, while those of the latter group were arranged in bands. The first starts with an erect triangle, while the second with a group of oblique parallel lines.

*Horizontal Patterns:* They are of two kinds: (i) triangles: complete solid ones, sometimes with forked top, (ii) ground pattern: triangles are halved and placed obliquely, or else directed upwards. The filling is done by trellis pattern and parallel lines. Triangles are sometimes grouped to produce rhombi-form pattern. Linear patterns are sometimes having spurs or dots directed upwards.

*Oblique Band Patterns:* These have been divided into several sub-groups: (i) simple parallel lines, (ii) parallel lines filled in with criss-cross or oblique lines or alternatively filled-in squares, (iii) triangles grouped in opposite positions, (iv) chain of round beads pattern, (v) waviform group, (vi) cross bands, etc.

In a few examples, the interior of the bowls carry sheaf or branch pattern on a long curved stem.

At Kara-Depe, significantly enough, for the first time, the goats, plants, onager and horse appear on painted pottery. Some pots are painted both from inside and outside.

Akin to the pottery from Anau Ib, mentioned above, is the pottery from Dashlidji-Depe (Khlopin 1960) located in the Geoksyur Oasis. However, there are a few differences—there was a distinct preference for light shades for the burnished slip and painted patterns, such as triangular chevrons, horizontal zig-zags and concentric segments along the rim in Geoksyur Oasis. Series of rhombs and stylized sheaf also occur. Deep bowls with carinated bottom is a very characteristic type.

The prolific variety in formal, functional and decorative patterns in pottery is intimately related to the sedentary nature of habitation since that alone allows time enough to be utilized in non-subsistence activities. But that is only one face of the phenomenon. The other face is represented by something more abstract. It is group-susceptibility to extra-mundane. It had greater and firmer roots in human civilization than generalized functional aspects of subsistence economy. That is why in archaeological studies we often use pottery form and decorations as representatives of groups of men, though not without reservation.

## Economy

The economic pattern of the Namazga I people was now decidedly based on agriculture and stock breeding. The two-row barely (*Hardeum disticum*) and wheat (*Triticum vulgare*) of the earlier varieties were still cultivated but on a larger scale to support the phenomenal growth in population. The emphasis was laid on larger amount of production. It was a quantitative change and not qualitative. Improved methods of ploughing was now adopted as a logical corollary—ring-stones as weights for the digging-sticks are now found at practically all the sites. Sickles fitted with flint blades were still used as harvesters, although it is possible that copper blade also made its appearance. New innovations resulted directly from the needs of intensive agricultural economy which was now being increasingly adopted. It is significant to note that at Dashlidji-Depe the percentage of bones of the domesticated animals went as high as 80 ! It means, now hunting played only the supporting role. The niches which were earlier filled with gazelle must have now seen the roaming sheep and goats and bigger and bigger herds. The wild animals, including gazelle, either migrated up the hills or selected new niches away from the human habitations. But let it be remembered that 20% hunting economy is not a small percentage.

## STRUCTURAL REMAINS

The sites of the western zone have been comparatively small with single-room houses built of rectangular mud-bricks. Unfortunately, none of the sites has been excavated on a scale sufficient to give us the clear idea of village planning; they heve been probed by trial trenches alone.

But the site of Kara-Depe (Masson 1960) of the Central zone has been excavated on a large scale. Here the remains of a large building have been exposed. It contained round storage-pits as well as living rooms with walls lined with pot-sherds. Russian scholars believe that it was a technique to protect the grain from dampness (Masson and Sarianidi 1972 : 57).

The walls were built of rectangular mud-bricks tempered with straw. The surface as well as the floor was plastered with clay, painted with red ochre. The doors may have been built of slightly heavy wooden planks mounted on poles since near the entrance stone sockets have been found. It was a definite improvement on the Djeitun houses whose door-ways were found without such stones.

### Religion

*Architecture:* At Anau the excavators have suspected the presence of shrine-rooms. The interior of one such room is covered with two rectangular panels consisting of red triangles enclosed in black frames and red chequered squares. The room is, however, completely devoid of cult objects. The painted panels, always consisting of geometric patterns, are also devoid of figural representations. Mellart (1975 : 220) feels that these patterns were undoubtedly inspired by textiles, although it must be observed that triangles and lozenges, the two predominant items of all the patterns have also been very popular motifs on painted pottery. Nothing definite, therefore, can be said about the exact form of worship conducted in these shrines but its distinguishing nature is evident. In this regard, Iran and Mesopotamia both give examples of similar types (Mellart, 1975) right from the Neolithic times. Their extra-mundane association has been suspected on the basis of platforms, hearths, etc., and by implication has been extended to Central Asia also. In Asia Minor at sites like Catal Huyuk the evidence is, however, much more concrete in figurative panels and mother goddess figurines (Mellart 1975). The problem is whether the system of painted shrines in Namazga I times came from West Asia (Mesopotamia and Iran) or it originated directly from the local sources. The Yassi-Depe shrine (details given below) is compared by Masson and Sarianidi (1972) with the al'Ubaid Painted Temple at Tell 'Uqair dated to about the same period, fifth millennium B.C. Possibly, Masson wanted to show the Mesopotamian influence over south Turkmenia, but as Tosi (1973-74 : 35) has rightly pointed out, the trait of Painted Shrines was pretty old in south Turkmenia—a room painted with jaguar figures and other zoo-geometric subjects existed at Pessedjik-Depe in the late Djeitun context, which may very well have provided the proper model. The excavators quote the example of Yassi-Depe (Masson, 1960). Here the location of the so-called house of religion was in the centre of the village. It consisted of two side-by side rooms (5·50×3·50 m) connected with a rectangular passage, 6×5 m. The U shaped hearth in back room has been interpreted as the altar whereas the walls of the same room with paintings have been taken as the 'creators of proper atmosphere' for the religious rites. The front room has its wall opposite the door. painted with polychrome (red, black and white) design. The side-walls of the antechamber are also found painted. Since there are several layers of painting, the wall must have been subjected to repeated execution of paintings. The earliest layer contains a row of black rhombs followed by a row of red rhombs enclosed in black frames. A later layer contains vertical rows of red triangles framed in white (Fig. 2.5). Although a comparison of this pattern is made

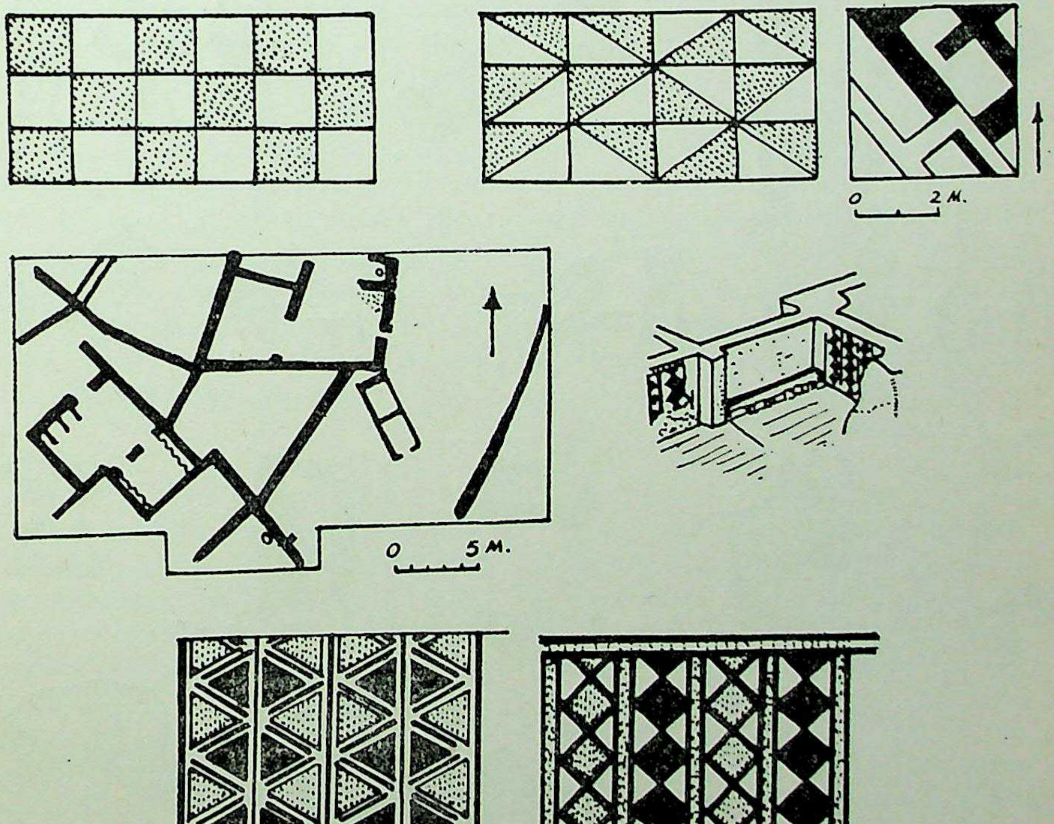


**Fig. 2.5.** Yassi-Depe. Structure, painted walls of shrine and painted designs. Namazga I times

with the Tell' Uquair temple, as noted above, yet it must be mentioned that in the 'Uquair temple the geometric friezes surround human figures (Lloyd 1943, pl. XII). But what is much more important is the discovery of the remains of wooden pillars along the other two walls, but at a short distance from them. 'The wall painting and the colonnade must have given the whole place an awe-inspiring appearance', observe Masson and Sarianidi (1972, 57). Whether or not the shrine created this appearance, the fact remains that

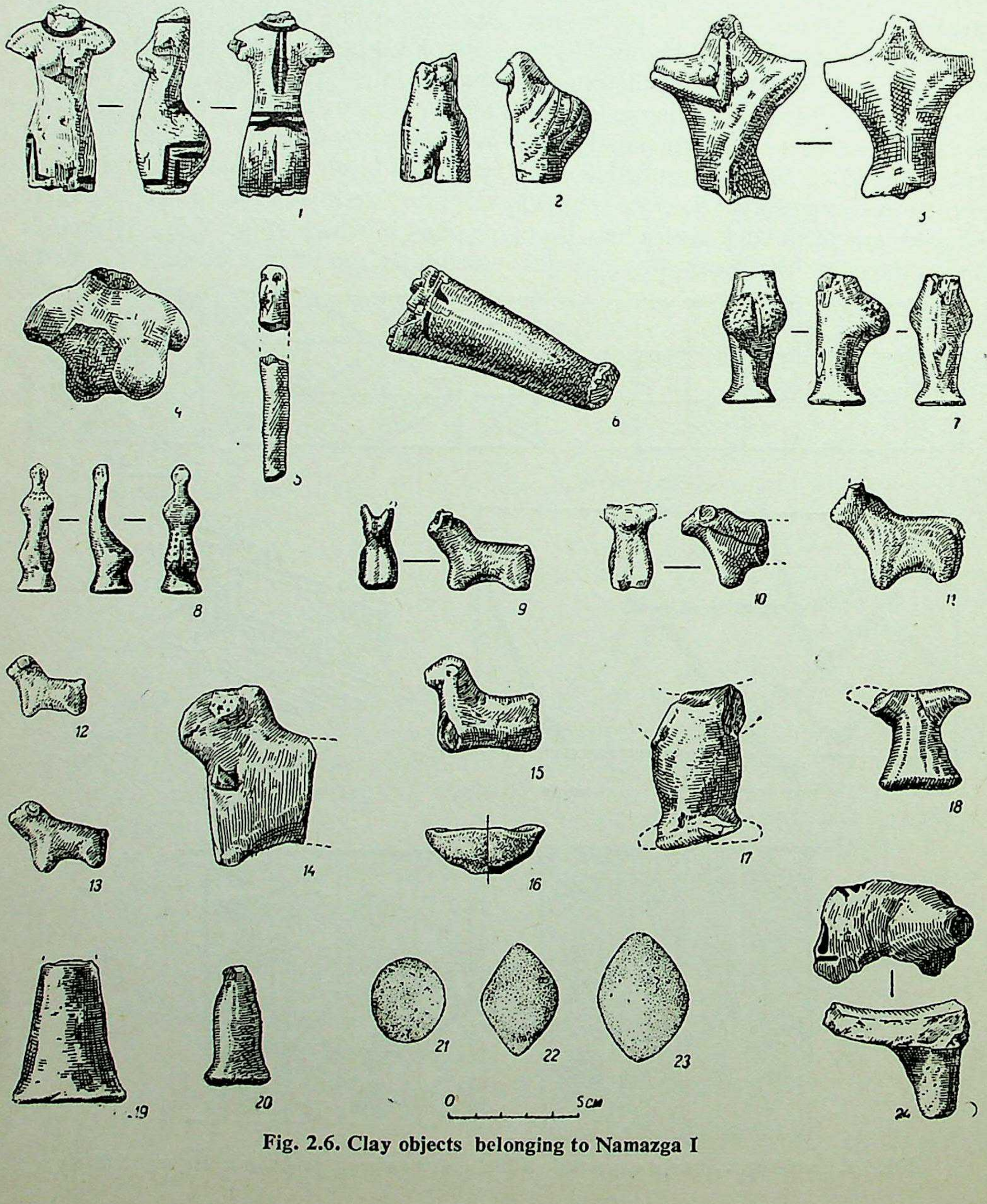


**Fig. 2.6. Clay objects belonging to Namazga I**

here the people must have felt differently than what they felt in their own individual houses.

*Figurines:* In this context we may also consider the terracotta figurines. Now the human figurines are more realistic than what they were in the earlier periods (Fig. 2.6). A female torso from Kara-Depe has been found decorated with a painted strip round the neck and falling on the back in two bands. Another terracotta figurine is that of a woman with fat enlarged buttocks, the steatopygous type. These and similar other figurines may have represented mother goddess. The sheep and cattle figurines, extremely schematic, are of clay and may or may not have been cultic objects. It may, however, be mentioned that none of these figurines came from the decorated rooms and the human figurines are only limited in number. Still, since this is the only painted house in the whole village it cannot be denied that some kind of magico-religious ceremonies may have been performed at the site in a very special manner although the commonly held rituals went round the mother-goddess figurines.

## TOOLS

As far as tools are concerned, flint sickle-blades were used along with bone and copper pins or piercers (Fig. 2.7). Here is the transitional period between the stone age and the age of metals. Flint tools are gradually replaced by copper tools, such as pins, awls, needles chisels, knives and, possibly, sickle-blades. Terracotta and clay conical spindle-whorls, found in a large number, would suggest improved methods of weaving and spinning being practised widely.

## ORNAMENT

The commonly found items of ornament include beads of semi-precious stones, such as carnelian and turquoise, although a few copper miniature pins with pyramidal knobs, possibly for hair-do, have also been found. From the graves, a few fine tubular beads of copper have been reported. The use of exotic semi-precious stones shows that some sort of exchange-trade was a regular feature of this culture : turquoise is found in Kysil Kumy desertic areas with hilly outcrops (Tosi 1974). Carnelian may have come from the Khorasan region. So also copper.

## BURIAL

The dead, both adult and child, were buried within the habitation, but not under the living floors. The dead body was placed in flexed manner, the head facing south. The funerary objects were confined to articles of personal adornment, such as beads and copper tubes. Studies on skeletons have as yet not been fully published.

## HOUSES

Besides the fortification walls and the shrines, the settlements are marked by 'a tendency for the unification of the structures into agglomerated residential areas.' This process, from individually separated houses to combined houses, however, reached its climax only in the next period, the Late Chalcolithic of Namazge II and III periods, which was natural. Most of the sites then witnessed multi-roomed houses, which was a great departure from the Neolithic and

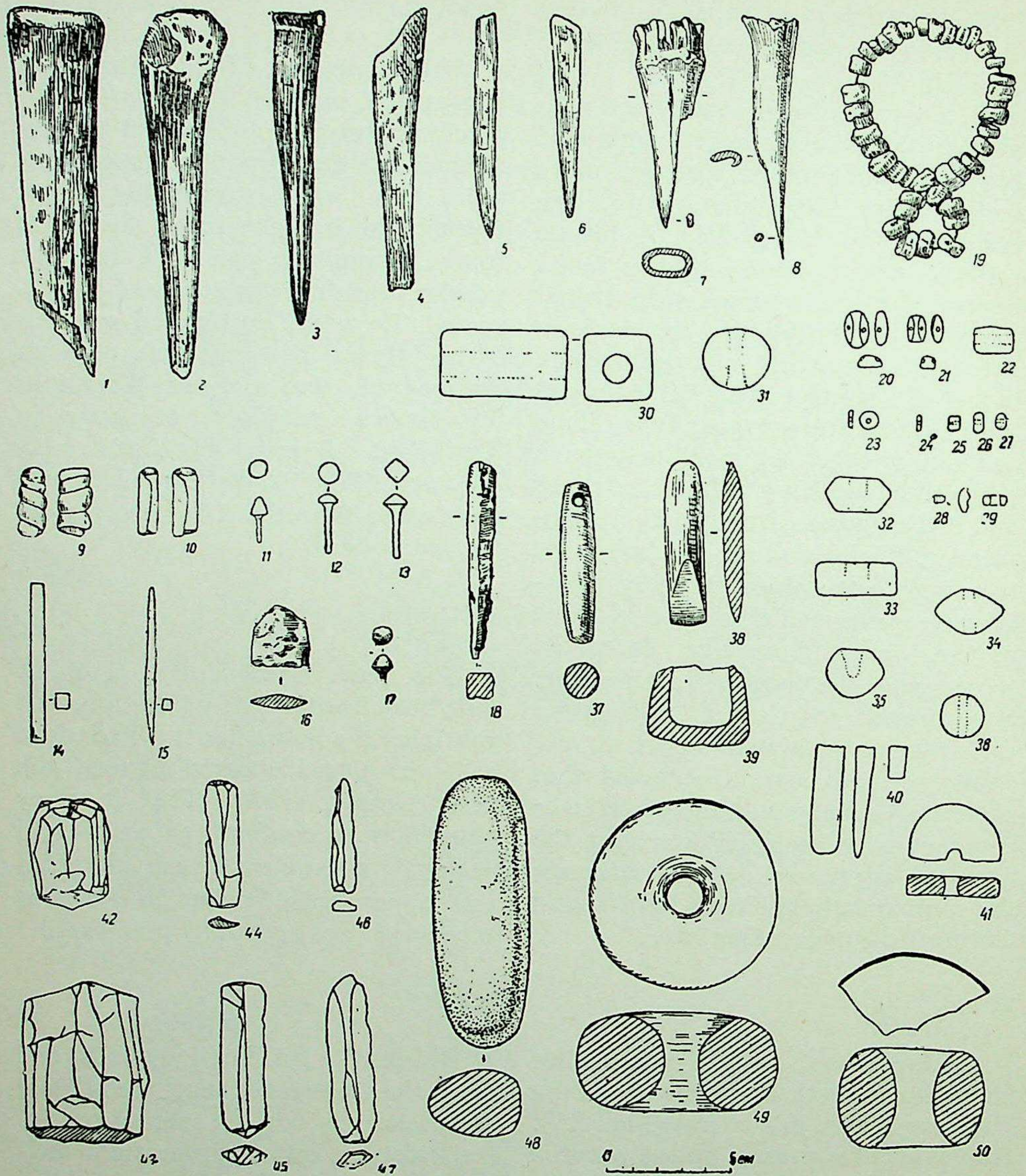

1
2
3
4
5
6
7
8
19
30
31
20
21
22
23
24
25
26
27
9
10
11
12
13
32
28
29
38
33
34
14
15
16
17
18
37
39
35
38
40
42
44
46
41
48
49
43
45
47
50
0
5cm

Fig. 2.7. Bone, metal and stone objects of Namazga I times

Proto-Chalcolithic practices in which only single-room houses were built. What does it show in terms of social structure? It reflects, possibly, the change from the system of individual nuclear families to the system of joint-families. As a corollary, it may also mean larger land holdings than before. Social systems and economic systems in an agricultural society are closely connected. Herein lies the birth of family holdings in agricultural lands. Whether in Namazga I times this system actually prevailed or not is a different matter. What is significant to note is that there occurred a change in the socio-economic structure whose directional changes admitted private holdings. Of course, many other factors are also required, such as the unbalanced land/population ratio, birth of some kind of corporate body or political authority.

In the Geoksyur Oasis the tool-kit was further augmented by a heavy copper axe and a copper razor. The bone tools, such as awls and piercers, also got added.

### AGRICULTURE

The wheat and barley of the earlier variety (two rowed) continued to be grown but their proportion was now 1 : 30, which shows that barley was more popular with the people as an item of staple food than wheat. This was also the case of Namazga-Depe in the central zone. But this interpretation may not be as simple as that. It is common knowledge that in deserts, where water-retention of the soil is poor, barley automatically grows more, and also with much more ease than wheat. In India the sandy region round the city of Jaipur in Rajasthan is now favoured for barley cultivation and not wheat.

### ANIMALS

The percentage of bones of the domesticated animals found at different sites now reach 90, in which goat and sheep dominate over cattle, 7 : 1. The bones of wild animals, such as the horse, gazelle, deer, boar and fox, are limited in quantity.

### Namazga I Sites located in the Geoksyur Oasis

As said earlier, the Tedjen delta was first colonised by the Namazga I people when they reached a certain level of maturity; *i.e.*, during their late phase. The colonisation itself may have resulted from the growth of population and the desire to break new grounds. It was, therefore, slow and gradual expansion towards the eastern regions, and not shift of population due to any external pressure; afterall, the distance between the eastern-most piedmont sites from where they are likely to have moved out in a small group (sites near the modern town of Kaakhka, such as Yassi Tepe or Sermanch Tepe) is only about 50 km. The theory of slow expansion is based on some very significant data—as we move from the west, say, the site of Anau, towards the east, in the Tedjen Valley, we find a graudal reduction in the thickness of the habitational debris (Masson and Sarianidi 1972: 59) Anau . . 12 m, Kara Depe . . 6.5 m, Namazga Depe . . 6 m, Geoksyur sites, all between 2 and 2·5 m. In this context, it must be made clear that the Namazga I population moving in the Tedjen Valley does not seem to have come from Anau but originated locally in the eastern sites. It may be recalled that in this piedmont region there was a constant local development of cultures right from the Neolithic times. Chagalli Tepe was a Djeitun site and Mondjukli-Depe and Chakmakli-Depe were the proto-chalcolithic sites. And now there was the Namazga I culture in ordered sequence.

Palaeo-botanical studies show that

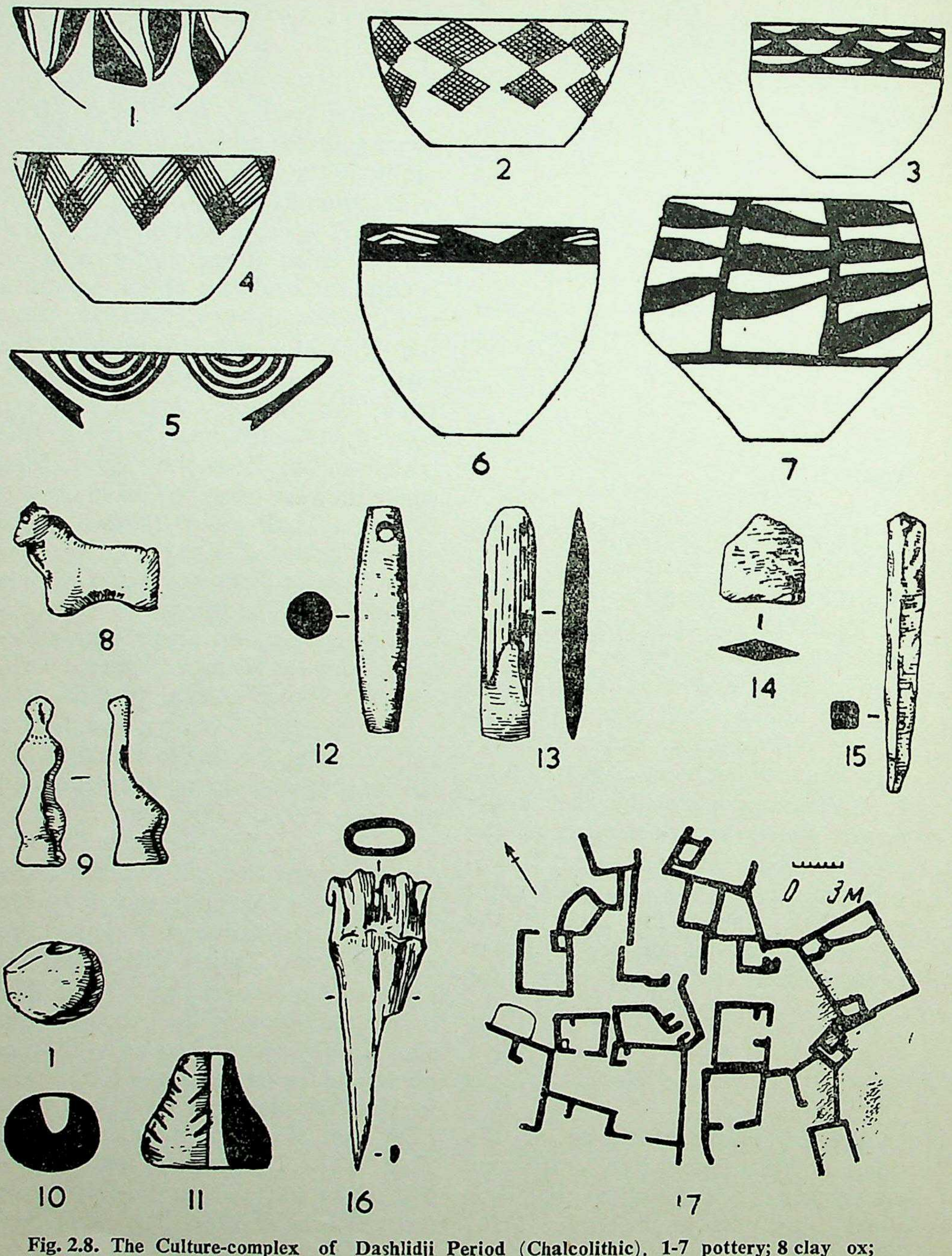


**Fig. 2.8.** The Culture-complex of Dashlidji Period (Chalcolithic). 1-7 pottery; 8 clay ox; 9 terracotta female figurine ; 10-11 terracotta spindle-whorls (?) ; 12 stone pendant; 13 stone adze or axe ; 14-15 copper objects ; 16 bone implement ; 17 settlement plan of Dashlidji site
*After Khlopin*

in the Tedjen delta, well-watered with sufficient soil cover, there grew several kinds of deciduous trees, such as poplar, tamarisk, maples and *gargach*. There was, therefore, enough of utilitarian wood for the villages which could easily be exploited by the people who had now reached a developed stage of technology.

The remains of this complex have been found in the lower levels of Akcha Tepe, Yalangach Tepe, Geoksyur 1 and 7, Ajina-Tepe and Dashlidji Depe. But possibly the most notable site is Dashlidji-Depe since at this site the entire deposit belongs to the Namazga I complex. Hence the Namazga I Culture of the Geoksyur Oasis is also known as Dashlidji Culture (Fig. 2.8). The site is very small, hardly 45 m×38 m in area and rising to about 2 m in height, with only three building levels having mud-brick houses. The houses were constructed on the Djeitun pattern—one-room apartments (6-12 sq. m.) with a courtyard and an out-house connected with it. The doors could swing on the stone-sockets, and the hearth was placed on the left of the entrance. In one of the rooms at the site, which is bigger than the rest, measuring about 28·5 sq. m., there was a hearth in a corner, as usual, but the floor was painted red and black. Was it the village shrine?

At the edge of the settlement, traces of a pottery-production area along with the remains of a kiln have been clearly marked by the excavators (Fig. 2.9).

Along the outskirts of the village, some straight parallel low-walls have been found. The excavators feel that they were possibly used for sun-drying of meat and corn. Incidentally, this was the typical village- and house-plan in the whole of south Turkmenia, including the Geoksyur Oasis.

The terracotta and clay figurines include human forms (Fig. 2.10) as well as sheep and goat. By and large, the female figurines are schematic, just as we have at Kara-Depe, in standing posture, although one from Dashlidji-Depe is plaque like, modelled

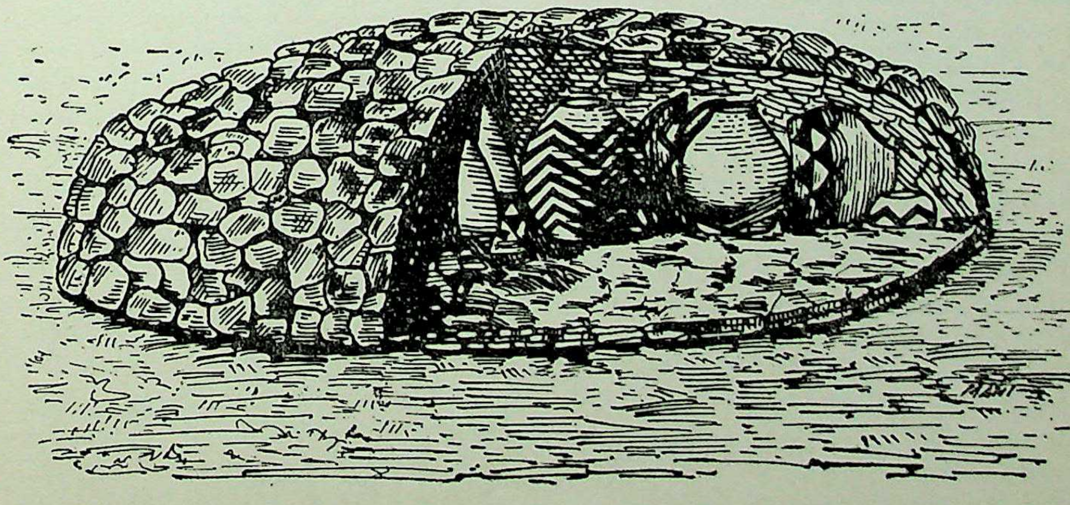


**Fig. 2.9. Reconstruction of a pottery kiln of the Chalcolithic times as found at Dashlidji-Depe and Yalangach-Depe**

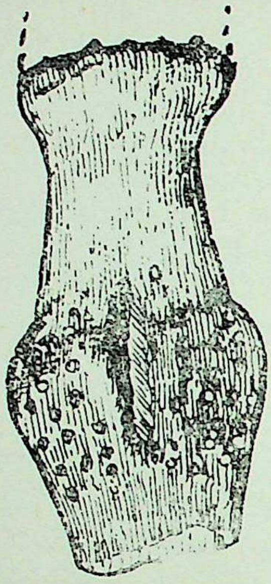


**Fig. 2.10. Torso of a terracotta female figurine from Dashlidji-Depe**

without arms and breasts, blurred face and long nose, with other features indicated merely by shallow depressions (Fig. S. 2.1) simulating some figurines in Susiana, *i.e.*, south-west Iran (Masson and Sarianidi 1972, 61). It is in contrast to the realistically modelled figurines of Kara-Depe of the same period. As in some of the hilly sites, the quantity of the bones of the domesticated animals (which provided meat, wool and milk, such as cattle and pig), was at least seven times more than the bones of the wild animals, such as onager, wild sheep and gazelle. When seen in the light of total absence of bone tools and discovery of as many as fifty spindle-whorls, it becomes obvious that stock-breeding, weaving, etc., played a more dominant role in the economy of the people than hunting. The pattern of production economy was now well established which set the trend for the succeeding period. It was a qualitative change from the formative period of Neolithic—Proto-chalcolithic economy to the developed Chalcolithic economy. And culturally, this was important.

### Stages of Expansion within the Geoksyur Oasis

During the Namazga I times when people moved from eastern piedmont region to the Geoksyur Oasis (Fig. 2.11), to begin with, they occupied three sites: Dashidji-Depe, at the terminal point of the main Tedjen channel, Akcha Tepe, upstream on another branch in the delta, and Geoksyur Tepe 1, along the central perennial channel. At a later date three more eastern sites were occupied, possibly due again to population spill-over. Geoksyur-7, Ajina Tepe and Yelangach Tepe were occupied during the last stage of the Dashli period. However, the site of Dashlidji-Depe seems to have been completely abandoned a little before the end of the Dashlidji Culture—people, due to hydrological changes, may have lost the source of water and shifted to sites like Akcha-Depe. The eastern places fully occupied during the 2nd stage of expansion were Ajina Tepe, Yalangach Tepe and Geoksyur 7. During the late stage, sites like Mullali Tepe, Geoksyur 1 and Chong Tepe were also occupied; may be during the late stage of the Yalangach Period hydrological changes were felt once more. During the 3rd stage (last), known as Geoksyur Period, Geoksyur I and Chong Tepe were occupied, Mullali and Geok. I were short-lived (Fig. 2.12).

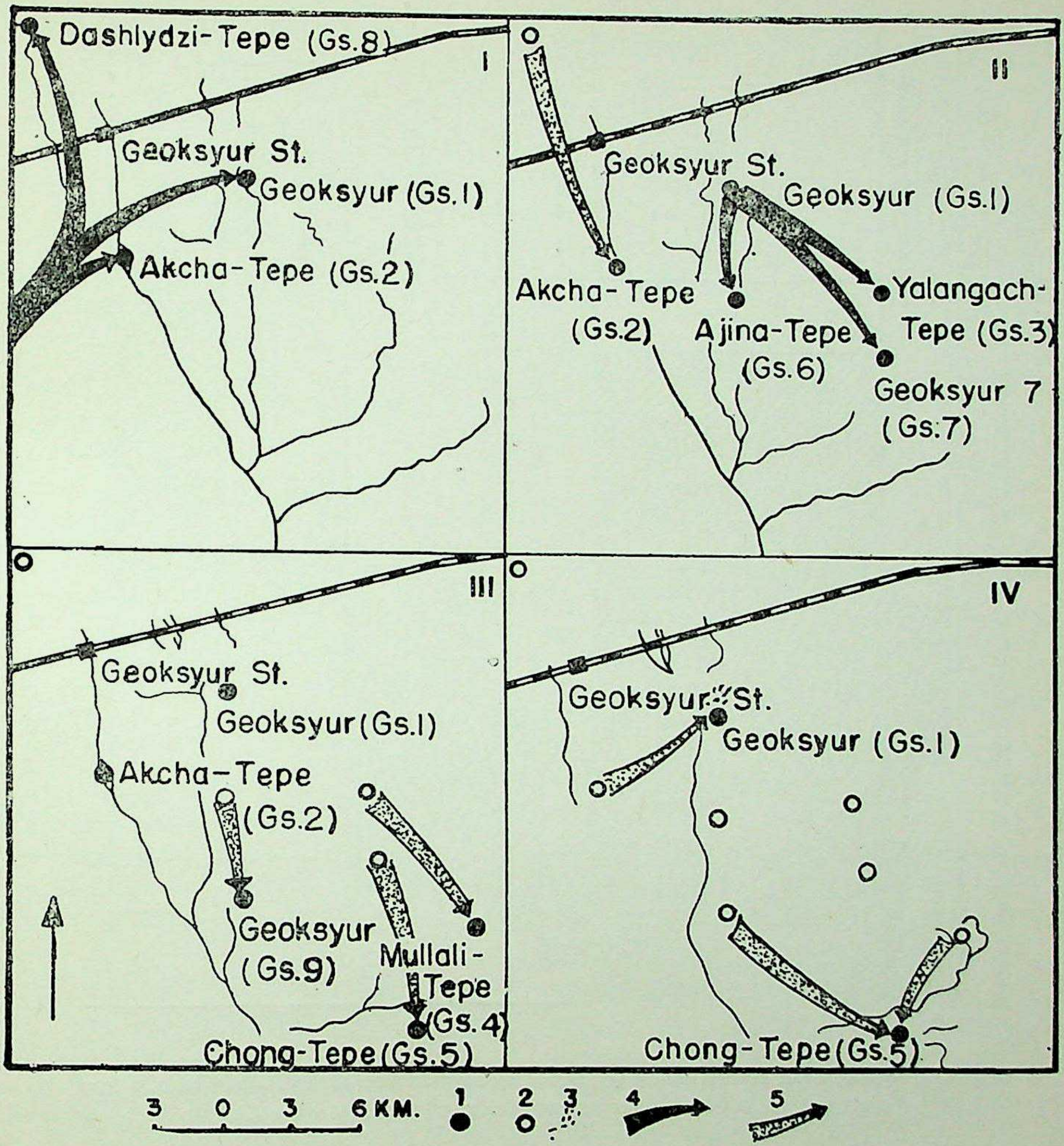

Dashlydzi-Tepe (Gs.8)
I
Geoksyur St.
Geoksyur (Gs.1)
Akcha-Tepe (Gs.2)
II
Geoksyur St.
Geoksyur (Gs.1)
Akcha-Tepe (Gs.2)
Ajina-Tepe (Gs.6)
Yalangach-Tepe (Gs.3)
Geoksyur 7 (Gs.7)
III
Geoksyur St.
Geoksyur (Gs.1)
Akcha-Tepe (Gs.2)
Geoksyur (Gs.9)
Mullali-Tepe (Gs.4)
Chong-Tepe (Gs.5)
IV
Geoksyur St.
Geoksyur (Gs.1)
Chong-Tepe (Gs.5)
3 0 3 6 KM.
1 ●
2 ○
3
4
5

**Fig. 2.11. Stages of occupation of the ancient delta of the Tedjen river. 1—Existent sites; 2—Abandoned sites ; 3—Artificial canals ; 4—Separation and diffusion ; 5—Transmigration**

*After Khlopin*

## NAMAZGA II CULTURE-COMPLEX: THE MIDDLE CHALCOLITHIC

The Namazga II cultural horizon has been marked by a distinct change in pottery, both in form and painted designs. The form now includes jars and shallow dishes, besides bowls with featureless rims. The painted designs were now predominantly polychrome, arranged mostly in symmetrical panels and placed usually on the shoulder of the pots. However, there are many examples in which paintings have been executed all over the surface. The triangles and rhombs, as also bands, were vertically arranged. The triangles

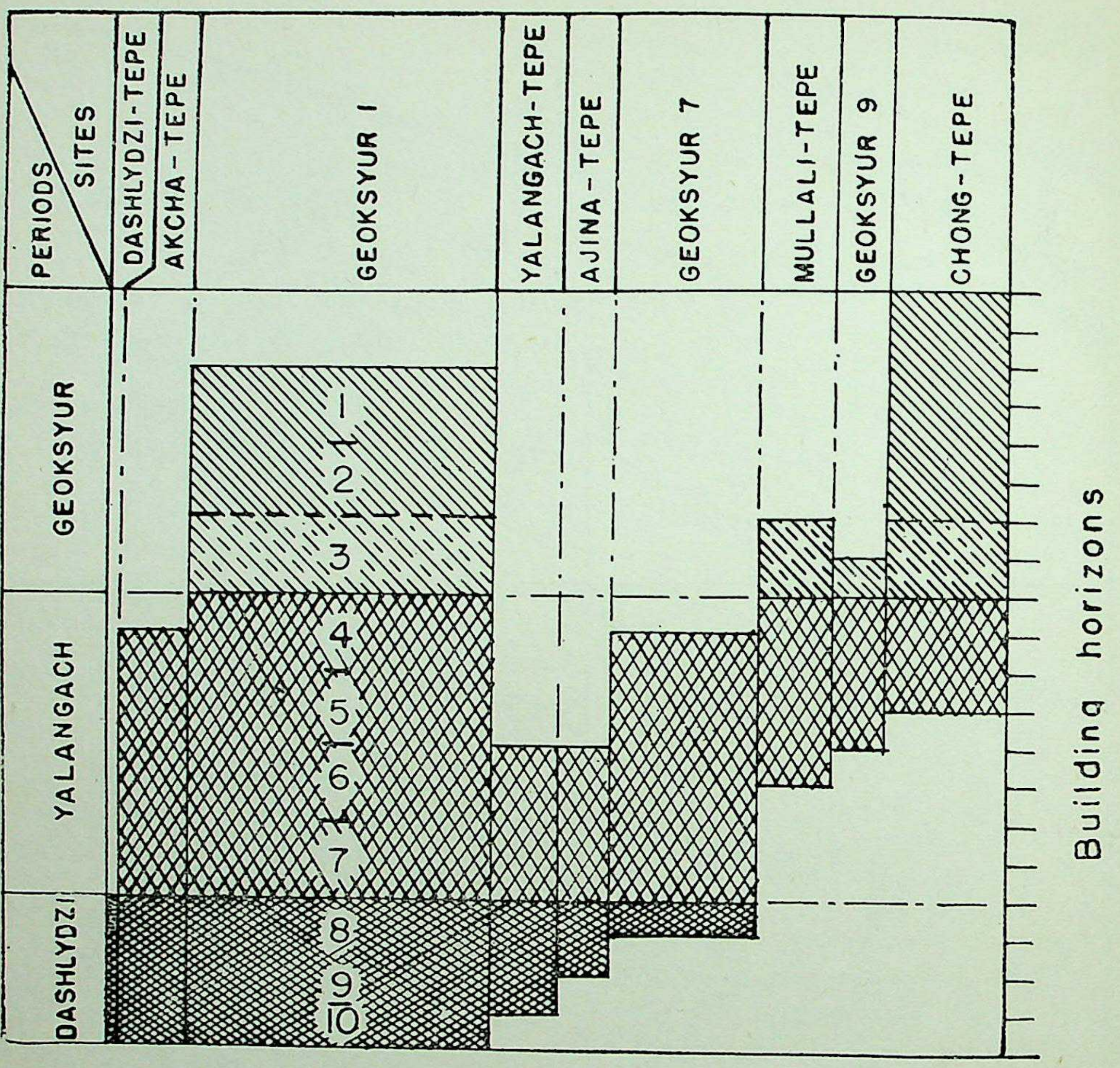


**Fig. 2.12. Stratigraphic correlation of different Chalcolithic sites of the Tedjen Oasis, with a survey of the building-horizons and the size of the sites.** *After Khlopin*

and rhombs, as also bands were vertically arranged. The Namazga II pottery, however, also included zoomorphic elements, such as goats and human beings, delineated in stylised manner, sometimes with exaggerated proportions. The brush work has often been very fine. Friezes produced in red and black had cream or yellowish background. As far as the central zone is concerned, Namazga II is best represented at Anau, Kara-Depe, Namazga-Depe and Elen-Depe. (Fig. M. 2.2). At Anau, however, plain red and grey ware and monochrome painted ware account for the larger number of potsherds than the polychrome ware. (Plate VI)

The pottery from Anau has been divided into (i) red monochrome ware (ii) grey monochrome ware, and (iii) polychrome ware. Pumpelly has illus-

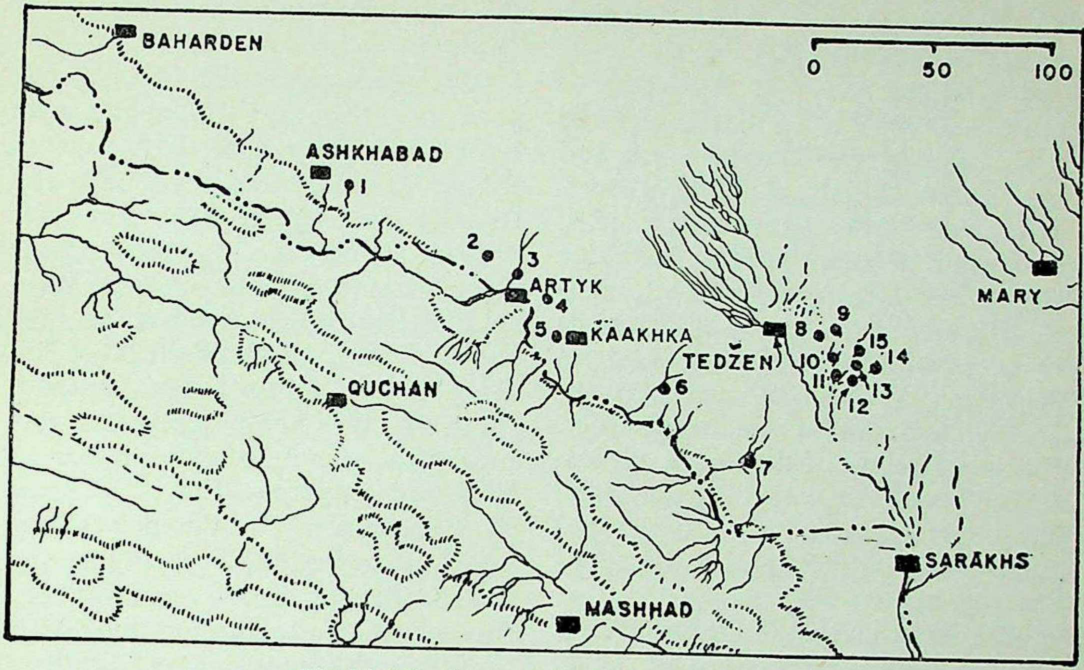


**Fig. M. 2.2. Namazga II (Chalcolithic) Sites**

1. Anau
2. Elen-Depe
3. Kara-Depe
4. Gara-Depe
5. Namazga-Depe
6. Ulug-Depe
7. Altin-Depe
8. Akcha-Depe
9. Geoksyur-1
10. Ajina-Depe
11. Geoksyur-9
12. Gong-Depe
13. Geoksyur-7
14. Mullali-Depe
15. Yalangach-Depe

trated each one of these, but possibly the site of Kara-Depe has yielded better results.

## KARA-DEPE

The Kara-Depe deposit has been divided into six levels, of which 2 to 6 belong to Namazga II complex. It has been divided into Early and Late phases—Early is represented by levels 6, 5 and 4 while the Late is represented by 3 and 2 (Plate VII).

The Early Phase of Kara-Depe has predominantly polychrome ware—62% of the total assemblage. The monochrome accounts for 10%. The rest are plain fine and plain coarse wares: red slipped hemispherical bowls often highly burnished and some polished grey ware in the same forms. Kara-Depe pottery has a few anthropomorphic figures also (Fig. 2.13).

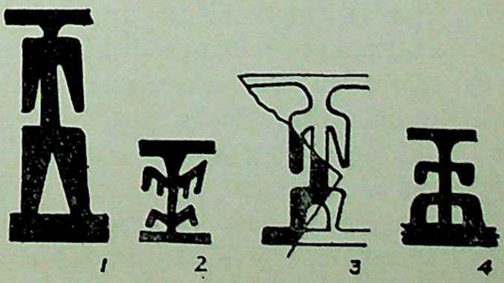


**Fig. 2.13. Painted anthropomorphic figures on pottery of Namazga II period. 1 & 2 from Geoksyur oasis, and 3 & 4 from Kara-Depe**

The houses were built of mud bricks, as in Namazga I times.

The Late Phase of Kara-Depe—Level 3—is marked by a decline in the percentage of polychrome ware and corresponding increase in the monochrome ware with zoomorphic motifs, the ware which continues in Namazga III. The houses remain the same—rectangular, with mud-brick walls plastered with mud. In some examples the floor was paved with bricks instead of clay, a feature not noticed earlier. Further, in some of the rooms pithos-shaped vessels were dug into the floors. The doors in most of the houses had stone sockets which again is a qualitative change.

The latest period of the Late Phase of Kara-Depe is represented by Level 2. The mud-brick houses of this level have been grouped in two or three complexes, separated by long thick walls. Each of these complexes consisted of living and domestic rooms, the latter having storage-pits now found with potsherds, pebbles and pottery waste. In this level polychrome pottery disappears and monochrome pottery predominates. The plain grey and burnished red wares are also conspicuous. The kitchen ware is usally coarse dull red or blotchy grey. The monochrome painted ware is known for its beautiful friezes with geometric patterns and schematized goats. Panels with squares, rhombs, triangles and circles are also found beautifully depicted.

It is significant to note that this three-fold sequence of Namazga II is applicable to sites like Anau and Namazga-Depe also. In south Turkmenia, this period really laid down the foundations for the first urbanization.

### Polychrome Pottery : A controversy

The occurrence of polychrome pottery in Namazga II complex has been, for a long time, a matter of serious debate. Iran (Schmidt) and Baluchistan (Piggott and McCown) both have been taken as the original home of this ware. Masson has, however, drawn our attention to the pottery from Level IV of site 'S' of Tal-i-Iblis in Iran (Masson and Sarianidi 1972 : 64). We do not accept the last suggestion since it shows no respect to space and geography. Further, it must be borne in mind that the polychrome ware has not been of local origin even at Tal-i-Iblis. Attention has also been drawn to the pottery decoration from Djovi in south-western Iran. All these are the cases of parallelism at best.

## BURIALS

Namazga II complex is also marked by elaborate burials laid in the wastelands of the habitation although it was not a regular cemetery. In fact, there was a peculiar rhythm in habitations and burials—when one portion of the habitation was deserted it was used as the burial-ground, then after some time, the habitation shifted to this portion, letting the graves buried below the houses. The other portion was now used as the grave-yard. The process was repeated. In effect, therefore, it meant that the burials found in level 3 actually belonged to level 2. At least 35 burials of level 2 were excavated. In Level 3, 21 burials were encountered. They have been grouped into two on the basis of the position of arms in relation to the body—in one group the arms were stretched besides the body and in the other the right arm was straight but the left arm was bent. The face, however, in both the groups faced right.

At Kara-Depe, it may be noted, one of the burial-pits was divided into two, each lined with mud-bricks. In fact, most of the burial-pits were lined with bricks. Usually, the dead was buried flexed, facing right but without any cover, though sometimes they were wrapped in reed mats and/or sprinkled with red ochre. The flexed body had its right arm close into the body and left arm bent at the elbow. It is interesting to note that in one example the pit contained the skeletal remains of three persons. The grave-goods often contained items of necklaces and bracelets, such as beads of gold, and semi-precious stones, including agate, carnelian, gypsum and azurite. A child's burial in level 3 contained 420 gypsum beads. Occasionally, these beads were wrapped in silver foils. It is significant to note that as a rule pots and pans were not placed with the dead although, in one example, that of an old woman, a single vessel was found buried.

TOOLS

The tool-kit of the Namazga II people remained practically the same as that of Namazga I people. It consisted of sickle blades of flint, but sometimes denticulate blades; also mortars, pounders and querns of sandstone, and ring-stones of limestone. The latter in large numbers but others very few. The metal tools, not very impressive, consisted of awls, a heavy axe, a razor and spearheads as well as pins with pyramidal heads and ornaments of twisted wire from Anau. The metallographic analysis of a large piercer from Kara-Depe shows 98% of copper, 1% lead, 0·1% nickel and 0·05% iron. The comparative paucity of copper tools can easily be explained on grounds of non-availability of the ore locally in south Turkmenia.

In the context of metallurgy it may be noted that the copper objects from Namazga II sites,both from the piedmont and Geoksyur sites, were made from copper through the complicated process of annealing to increase the hardness of the tools. This gives definite evidence of technological development; of course, if the objects were not imports as such, for which there is no proof either. Besides these, bone tools were also made, such as awls and pins (Fig. 2.14 and 2.14a).

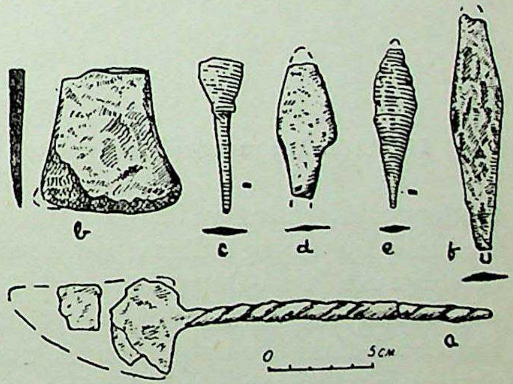


**Fig. 2.14. Metal tools of the Chalcolithic period : (a) Mullali-Depe; (b),(e) and (f) from Yalangach-Depe ; (c) and (d) from Geoksyur-Depe**

FIGURINES

Curiously enough, the terracotta figurines are comparatively very few. They are shown in seated position, the style previously not met with in this region. Some of the figurines are painted with zig-zag lines on the hips whose meaning is not clear to us, but may be magical. In one example, a goat, comparable to the goats painted on pottery

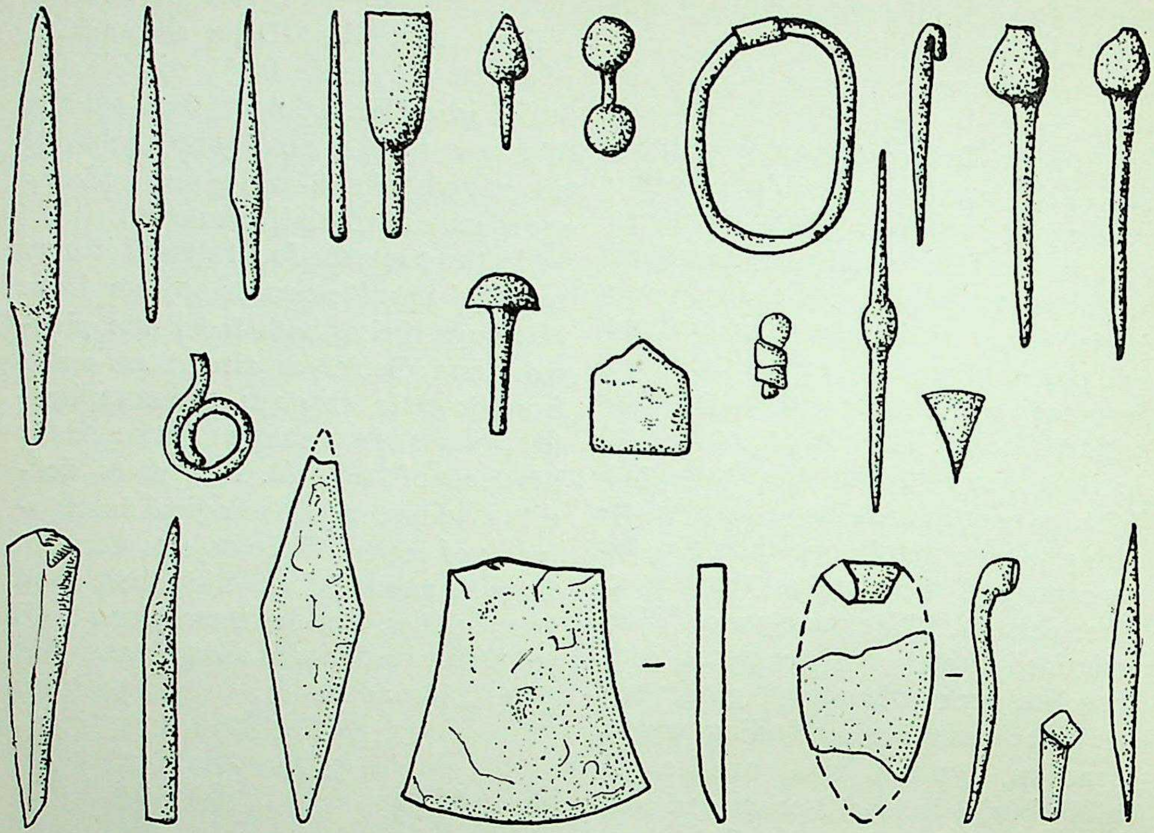


**Fig. 2.14a. The variety of copper objects from the Chalcolithic sites of south Turkmenia**

also appears painted on its hip which is equally intriguing unless it was done casually. At Kara-Depe, in Level 2, was found the seated figurine of a bearded human being which is the ancient-most example of its kind in this region. A terracotta cart-wheel with projecting hub is very significant in terms of mobility of the goods and peoples.

The Namazga II culture was, how-, ever, not confined to the central zone, it also appeared in the Geoksyur Oasis but, significantly enough, without the polychrome ware. In fact, here the older tradition of monochrome ware continued with its own developmental pattern. A sort of regionalism in cultural pattern is now evident although overall uniformity is maintained throughout south Turkmenia.

### Sites in the Geoksyur Oasis

During the period under consideration, Geoksyur Oasis had the largest population spreading over eight sites, some like Geoksyur I, covering as large an area as 25 acres. Besides Yalangach-Depe, Mullali, Aina, Akcha, Chong, Geoksyur 7, Geoksyur 9 and Geoksyur 1 were occupied. In the context of Geoksyur Oasis the period of Namazga II is also called Yalangach Period (Fig. 2.15), after the name of a site thoroughly probed by the excavators. The site was, however, not big, only 130 m × 95 m with 5 m thick deposit (Fig. 2.15a). Details of upper two levels of structures are quite revealing in terms

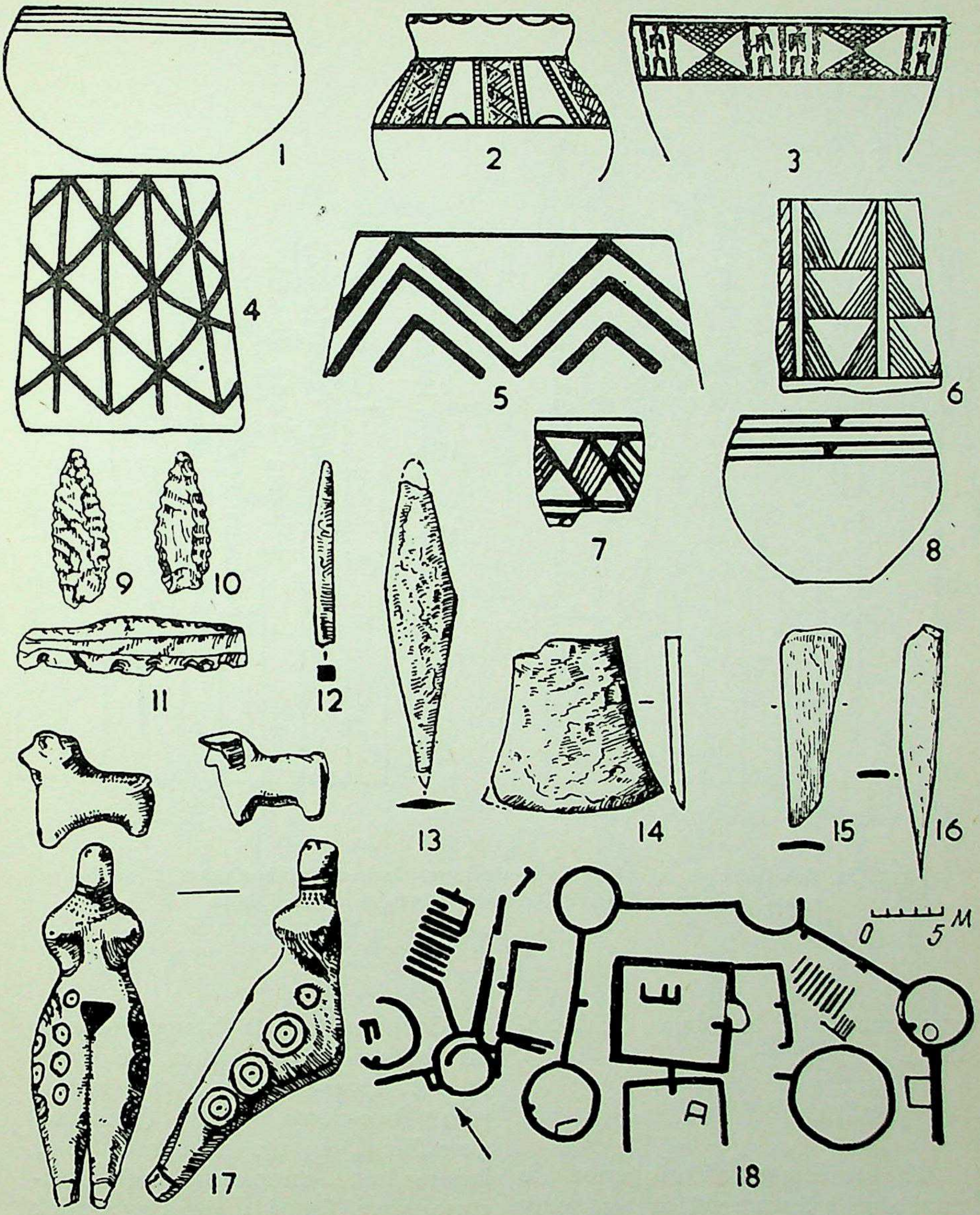

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
0 5 M

**Fig. 2.15.** The culture-complex of the Yalangach Period: 1-8 pottery; 9-11 flint tools; 12-14 copper implements; 15-16 bone tools; 17 clay 'mother goddess' figurine; 18 plan of the Yalangach settlement. *After Khlopin*

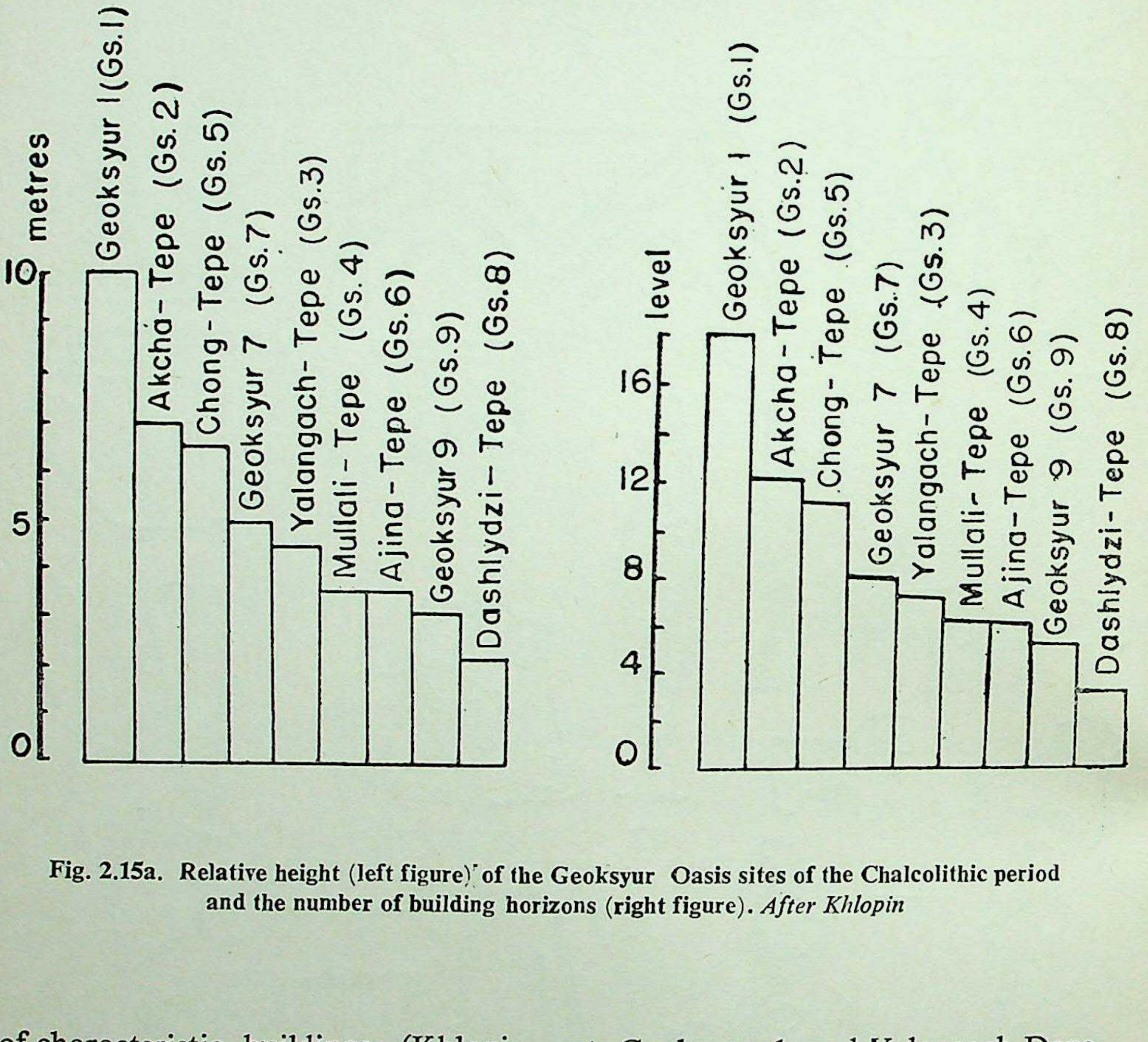


**Fig. 2.15a. Relative height (left figure) of the Geoksyur Oasis sites of the Chalcolithic period and the number of building horizons (right figure).** *After Khlopin*

of characteristic buildings (Khlopin, 1964).

## FORTIFICATION

The settlements of this period are marked by a feature which was only suspected in the case of earlier settlements—they are completely or partially surrounded by a defensive wall with round towers at regular intervals (Fig. 2.16a.). This is very well attesetd at Geoksyur 1 and Yalangach-Depe. At Yalangach-Depe within the tower in the upper-most level two rooms with two-tiered oven (podiums) were found. In the next lower level independent complexes of structures were found divided by a thick wall. Some of the other sites with this feature are Mullali-Depe, where the details of the fortification, presumably all along the periphery of the settlement, are beautifully preserved. The

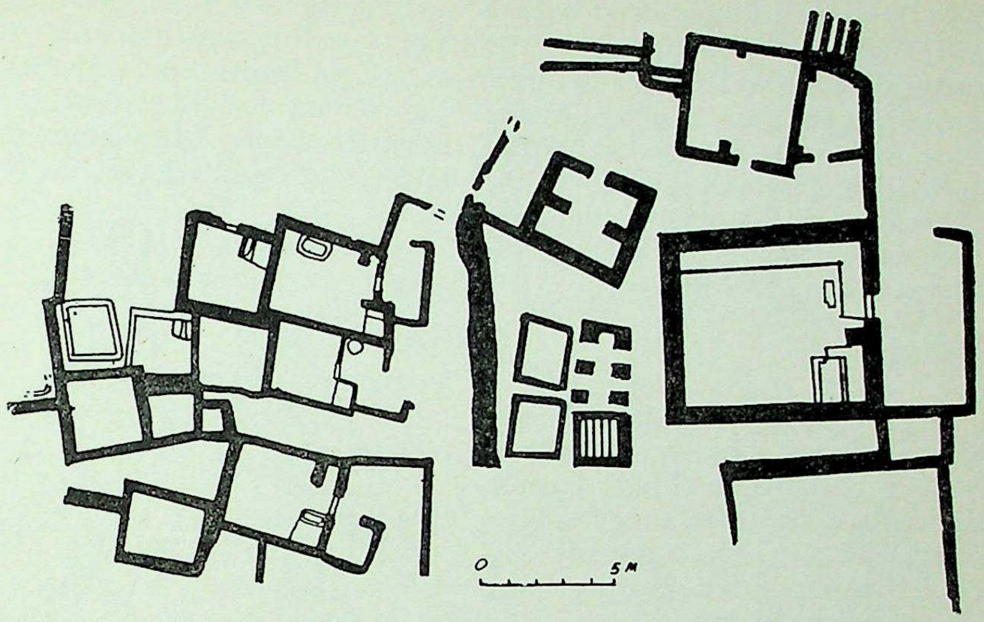


**Fig. 2.16.** Settlement of Yalangach-Depe. Mark two groups of houses

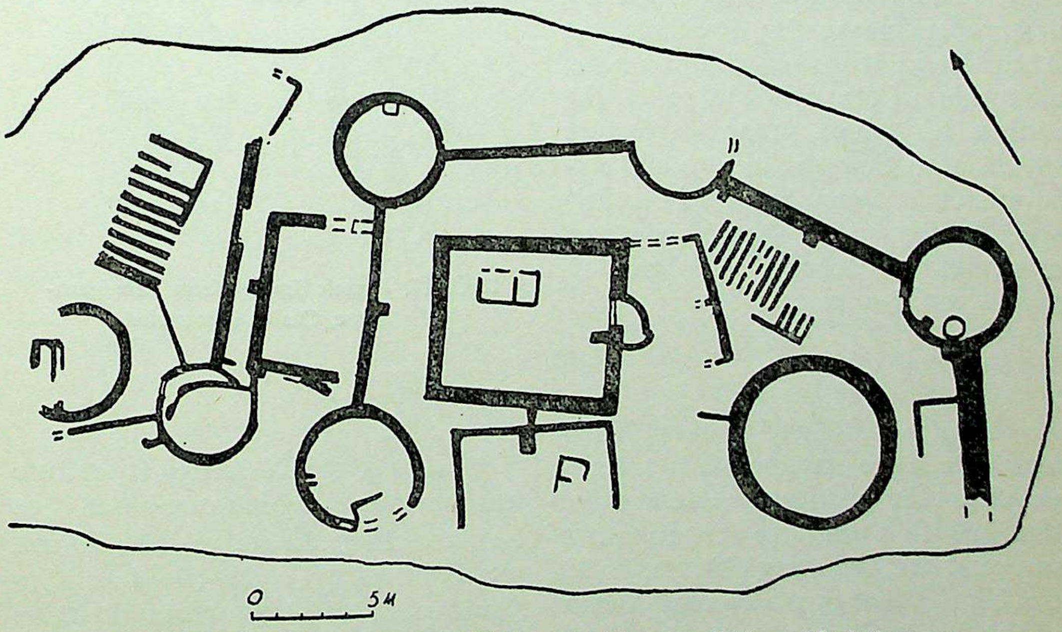


Fig. 2.16a. Settlement-plan at Yalangach ; Namazga II times. Mark the towers

same is true of Aina, Akcha, Chong and Geoksyur 7 and 9. At Akcha-Depe and Geoksyur ditches around the outer side of the towers have also been noticed. However, looking at the extent the habitation at Geoksyur-1 in relation of other sites (Fig. 2.15) one can easily make out that this was a kind of 'capital city' of the region. The other sites, rather too small, served as the feeders, but, in the process, got supported by industrial goods. It is possible that the trade was largely organized by some central authority (however informal it may have been) stationed at Geoksyur-1. The authority may have emerged by sheer man-power required in long-distance trade, we do not exactly know. But its position of eminence started in the previous period (Dashlidji) itself since even during that period this was the biggest site.

## SHRINE

Yalangach-Depe has yielded houses having a central room and a number of ancillary rooms. One of these complexes, on the eastern side, was possibly a shrine with clay podium, usually divided into two parts, one bearing traces of burning, as if it was used as an altar. The western portion of the settlement was meant for dwellings. At Akcha-Depe, it is significant to note, the corners of the raised edge of the podium had short pillars, a feature which shows that special care and elaboration was being bestowed on shrines. It may imply that slowly and gradually priesthood was gaining special social-status.

## FIGURINES

The terracotta figurines from Yalangach-Depe are extremely characteristic of mother goddesses. Here more than 100 of them have been found; a complete one, in sitting posture, is 28 cm. high, although the average height of the figurines ranged between 10 and 12 cm. It is to be noticed that although the facial features are extremely schematic, and the figure is devoid of arms, the breasts are full and the thighs are extremely heavy. Necklace has been incised, although occasionaly painted also, pubic has always been painted and shown as a solid triangle. The legs bear painted roundels, whose meaning is not clear although they may have represented sun symbol. In rare examples, arms have been shown folded on the stomach (Fig. 2.17).

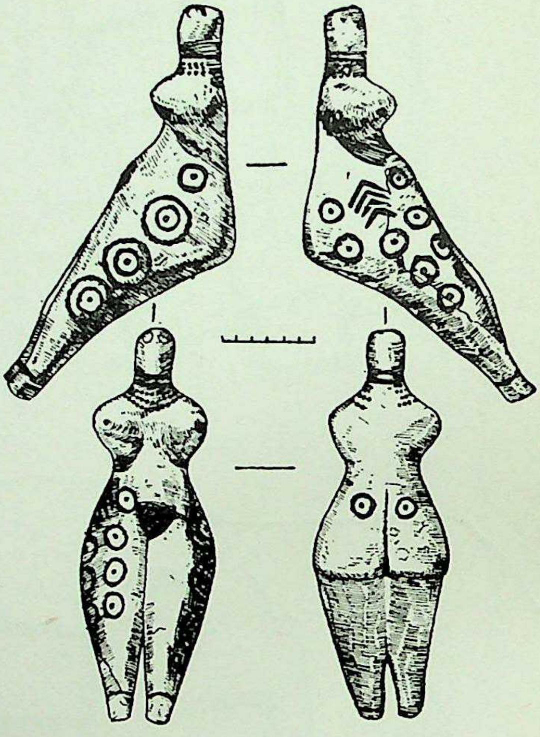


**Fig. 2.17. Female figurine from Yalangach-Depe, Chalcolithic period**

## ECONOMY

Basically, the Namazga II culture was as much agriculture-based as Namazga I was. In excavations, charred seeds of two-row barley (*Hordeum disticum)* and two-row wheat (*Triticum vulgare)* of the earlier period were found now also. They were found in quantity enough to work out their ratio also—30:1. The predominance of barley was also attested earlier. In the Geoksyur Oasis it is natural, because of the dry desertic condition, but that it was also so in the piedmont region can be ascribed only to traditional mode of cultivation and the food-habits of the people.

The role of hunting of wild animals in the economy was, however, gradually reduced. Now 90% of the bones collected belonged to domesticated animals. Of these, goats and sheep dominate over cattle in the ratio of 1 : 7. The wild animals represented in the osteological material are the horse, gazelle, western Central Asian deer, boar and fox. Obviously, a stage was reached when selective hunting in thick brushwood, the natural habitat of the above mentioned wild animals, became the way of life. It was much different from the situation existing in earlier periods when the percentage of wild animals *vis-a-vis* domesticated animals was as high as 20% and the role of full-time hunters could not be minimized. 10% hunting economy is perfectly justified in an early agricultral society passing through the transitional stage—from village economy to urban economy.

### SETTLEMENT

It is significant to note that although during this period single detached houses of the Neolithic and early Chalcolithic were still made, (Fig. 2.18), still a clear-cut tendency towards agglomeration of houses in different groups had started. Of course, the climax of this tendency was reached only in the next stage, the Late Chalcolithic when multi-roomed houses were developed, a practice that was followed practically all over south Turkmenia, at least from Kara-Depe to Geoksyur. It certainly reflects social changes through which the social structure was passing—from nuclear families to extended families.

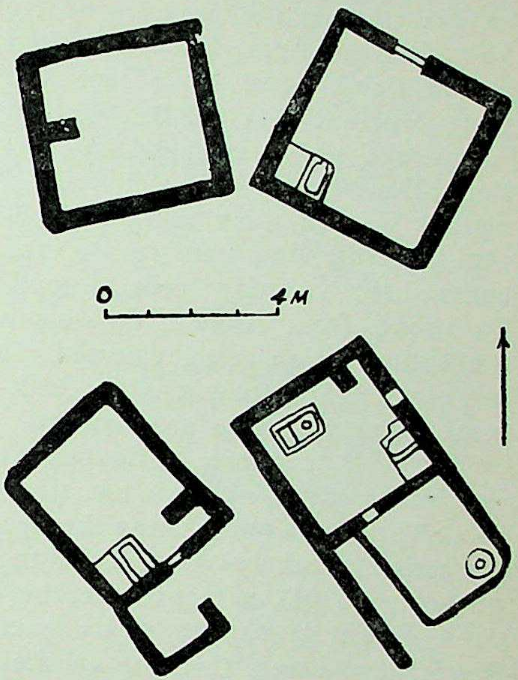


**Fig. 2.18. Different house-plans at Yalangach-Depe**

### CONTACTS WITH SITES BEYOND THE GEOKSYUR OASIS

The Geoksyur Oasis sites were connected with the Kopet-Dag mountainous sites. It is proved by the occurrence of characteristic polychrome (red and black paintings on cream coloured surface) pot-sherds in the Central zone pottery bags like of which belonged to the Geoksyur sites. Mention may be made of sherds with faunal and floral motifs as well as with fanatistic creatures of mixed human, arboreal and avian elements. Masson and Sarianidi (1972, 70-71) brought to our notice the presence of 'a small group of monochrome pottery, decorated with large hatched and cross-hatched rhomboidal and triangular patterns' at all the sites. They observe that it has its 'analogies in distant Mesopotamia' although it is a moot point. He has further noticed the presence of the Yalangach pottery at Kopet-Dag sites, *e.g.*, at Ilginli-Depe, Altin-Depe and Ulug-Depe, as also further west at Kara-Depe and Namazga-Depe. At Ilginli-Depe the Yalangach period deposit was as thick as 5 m. Obviously, for the first time real unified culture-area covering most of south Turkmenia, from Anau in the west to the entire Tedjen delta, emerged. It was certainly the prelude to the forthcoming protourban culture-complex.

There is, therefore, no doubt that in the 5th and 4th millennia B.C., when south Turkmenia was passing through the period of culture-consolidation the phenomenon of culture-contact between distant lands was at its base. But, it may be seen, that the cultures with which it shared its ethos were from the contemporary civilized West Asia and the Indian borderlands and not the rest of Soviet Central Asia which was still passing through the early stage of neolithism of a variety which depended more on hunting and collection than on production.

## SOUTH TURKMENIA AND BALUCHISTAN

It is difficult to visualize the relationship between Central Asia and India during this period. The only possibility lies in the polychrome ware found in Baluchistan at sites like Nal since the Middle Chalcolithic pottery of the Kopet-Dag is marked by a similar (not identical) ware. In fact, Piggott once went to the extent of suggesting that the polychrome pottery from Anau was influenced by the Baluchi polychrome pottery, in characteristic designs, between the two assemblages. None of the Baluchi wares is earlier than 3000 or 3200 B.C. as the uncorrcted $^{14}C$ dates clearly show, while the south Turkmenian Early Chalcolithic, to which Anau II belongs, ends in the fourth millennium B.C. itself, again, as the uncorrected dates show. But, since the similarity in the wares has sometimes been noted, the possibility is that the Baluchi polychrome wares represent the later manifestation of a tradition (of course, only of generalized kind) that had engulfed not only south Turkmenia but also parts of Iran. Broadly speaking, southern Soviet Central Asia, north-western Iran, Baluchistan and Afghanistan formed one big culture-geographical area in the fourth millenium B.C. in which for the first time we start getting similar trends in pottery decoration, flint implements, clay figurines, etc. Movement of people and ideas lies at the base of many cultural similarities, may be only at the nomadic level, as Shaffer visualizes (1977), although in each case, archaeology, a rather too blunt a tool, cannot hope to prove it. Still, when the sources of metals, minerals and sea-products, used in industrial products, are plotted on the map of this part of the world, a distinct picture of exchange-trade clearly emerges. It is through this that we can visualize the mobility, albeit limited, of the people over long distances. However, for each item found at a place that belongs a very distant place we need not visualize direct exchange situation ; indirect exchange must also had been in vogue. But that would further strengthen the hypothesis of one 'culture-share area' since at the base of such a hypothesis movement of common ideas through chain sys-

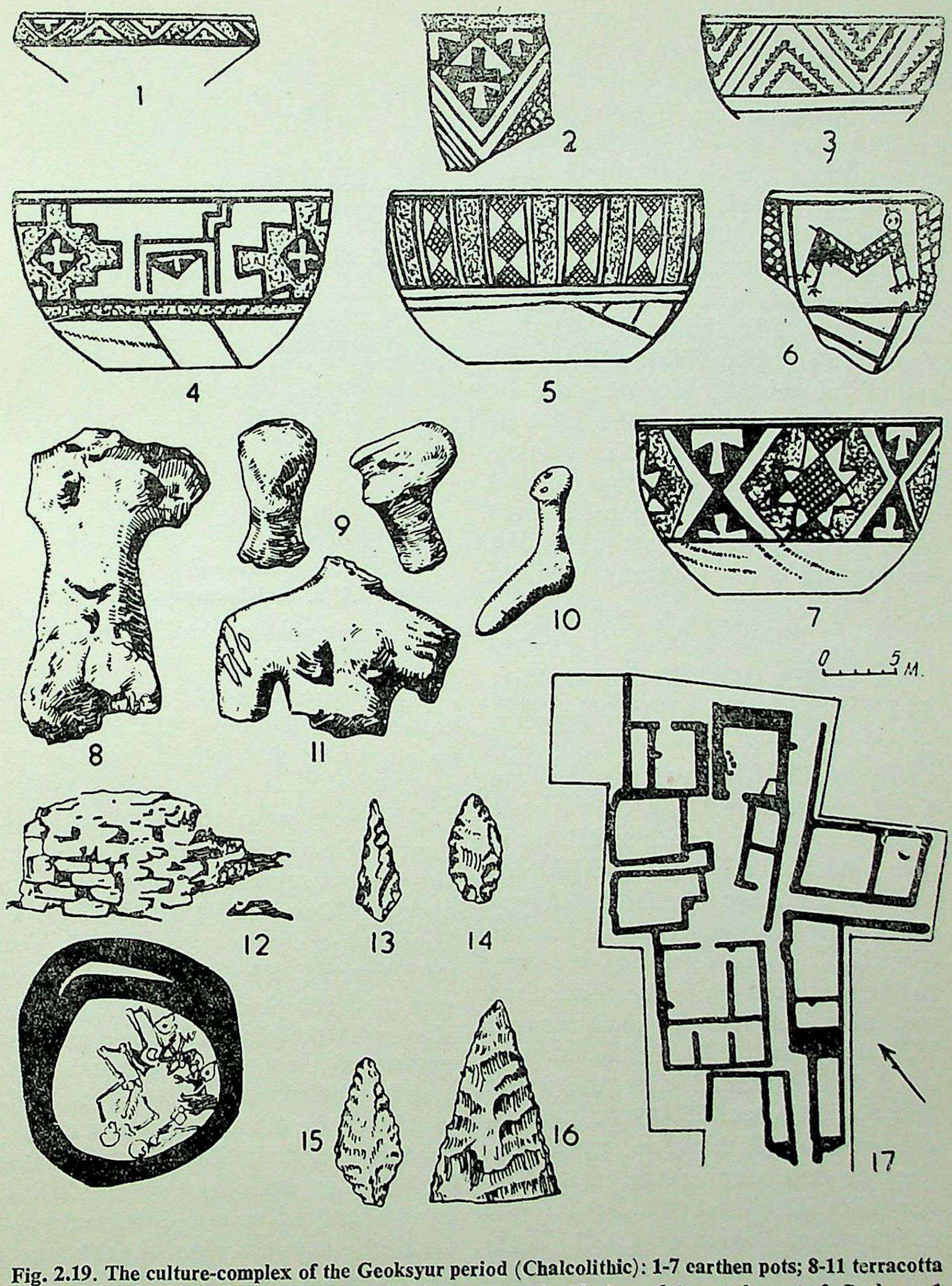

1
2
3
4
5
6
7
8
9
10
11
0 5 M.
12
13
14
15
16
17

**Fig. 2.19. The culture-complex of the Geoksyur period (Chalcolithic): 1-7 earthen pots; 8-11 terracotta female figurines; 12 burial chamber; 13-16 flint arrowheads; 17 plan of the settlement of Geoksyur-1 site.** ***After Khlopin***

tem or limited physical movement is always implied. It may, however, be made absolutely clear that the concept of 'culture-share area' does not negate the existence of a variety of cultures, even, distinct cultures; it stands only for culture-exchange and culture-interaction at different levels and through different mechanisms.

Now, what kind of movement of people it was? Shaffer (1977) has given us a very plausible model in respect of Baluchistan which may also be seriously considered in the case of south-Turkmenia and Indian borderlands—the nomadic tribes play a vital role in taking certain categories of objects from one place to another, without 'trade' as such being involved in it.

## NAMAZGA III CULTURE-COMPLEX : THE LATE CHALCOLITHIC

The tradition of polychrome ware which characterized the Namazga II times gave way in Namazga III times to a monochrome ware of richly decorated kind the like of which did not exist earlier in any part of Turkmenia (Fig. 2.19). Since its roots, according to Masson, may lie in northern Iran and other neighbouring regions and a $^{14}$C date comes to 2750±220 B.C. and it has been surmised that the period between 3000 B.C. 2500 B.C. to which the Late Chalcolithic (Namazga III) of Central Asia may belong, witnessed the migration of several tribes into the submontance region of south Turkmenia (Masson and Sarianidi 1972 : 76). The indirect outcome of this culture-contact situation, it is held, lies in the improvement in the irrigation system; remodelling of the village-plan and enlargement of the housing units. The direct outcome was a distinct change in the decorative motifs of the pottery, the form of the terracotta figurines and the select items of the tool-kit.

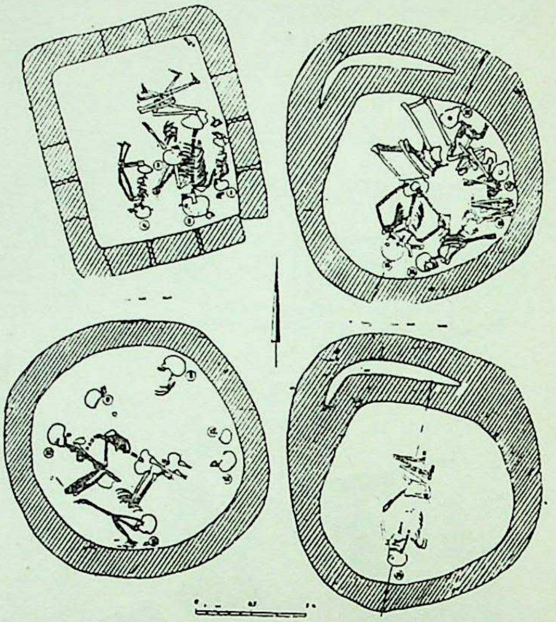


**Fig. 2.19 a. Tholoi graves at Geoksyur-1**

The proposed date of Namazga III, comparable with Early Dynastic a-b has not been accepted by Lamberg-Korlovsky (1970 and 1971) in the light of Tepe-Yahya chronology although Tosi (1972) would still accept the Russian stand on it. According to Lamberg-Karlovsky the geometrically decorated pottery of Geoksyur, Shahr-i Sokhta and Damb Sadaat II will be dated to the middle of the 4th millennium B.C., *i.e.*, contemporary with Uruk IV and Gaura IX. In our opinion also it is a little early date but Russian date may also be a little late in view of the Namazga IV-V contemporaneity with the Indus Culture. We favour 3200-2700 B.C. bracket for Namazga III. To this period belongs Yahya IV b and c (3400-2500) B.C.

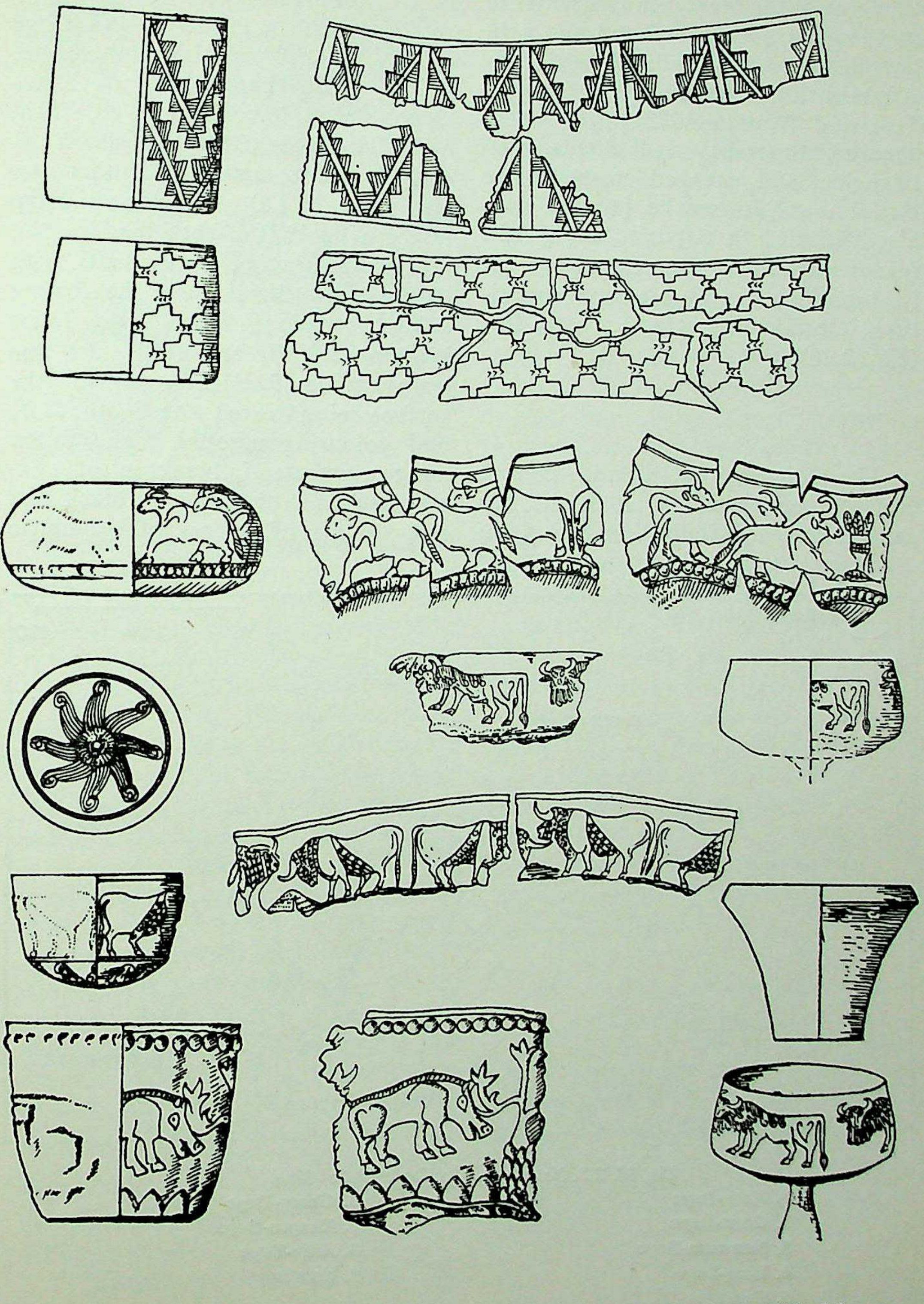


**Fig. 2.20. Gold and silver objects from Tepe Fullol, Afghanistan.** *After Tosi and Wardak*

Some of the Namazga III geometric motifs have also been found on gold pots and pans from Fullol Hoard from Afghanistan (Dupree *et el* 1971 and, Tosi and Wardak 1972), particularly square metopes diagonally divided into triangles and stepped crosses. The Fullol hoard, it may be pointed out, also included a pot with a typical Mesopotamian bull representation. It is, therefore, a classic example of cultural intermingling at a very early date (Fig. 2.20).

POTTERY

The Namazga III period cannot precisely be visualised at Anau because there the periodization after Anau II is confused—Anau III combines what are now considered Namazga III, IV and V. We have, therefore, to rely upon the evidence of Kara-Depe's latest levels, Ia and Ib, which fully disclose the contents of the Namazga III culture-complex at other sites also (Fig. M.2.3). The pottery from this level consists of both the fine and the coarse varieties, as is usual with all the habitational sites, the former being the table ware while the latter kitchen ware. By and large, the fine ware is made of well-levigated clay, the surface being treated with light red or buff colouring material. The painted designs, executed in black, in some examples even in two colours, black and red, consist of a host of geometric

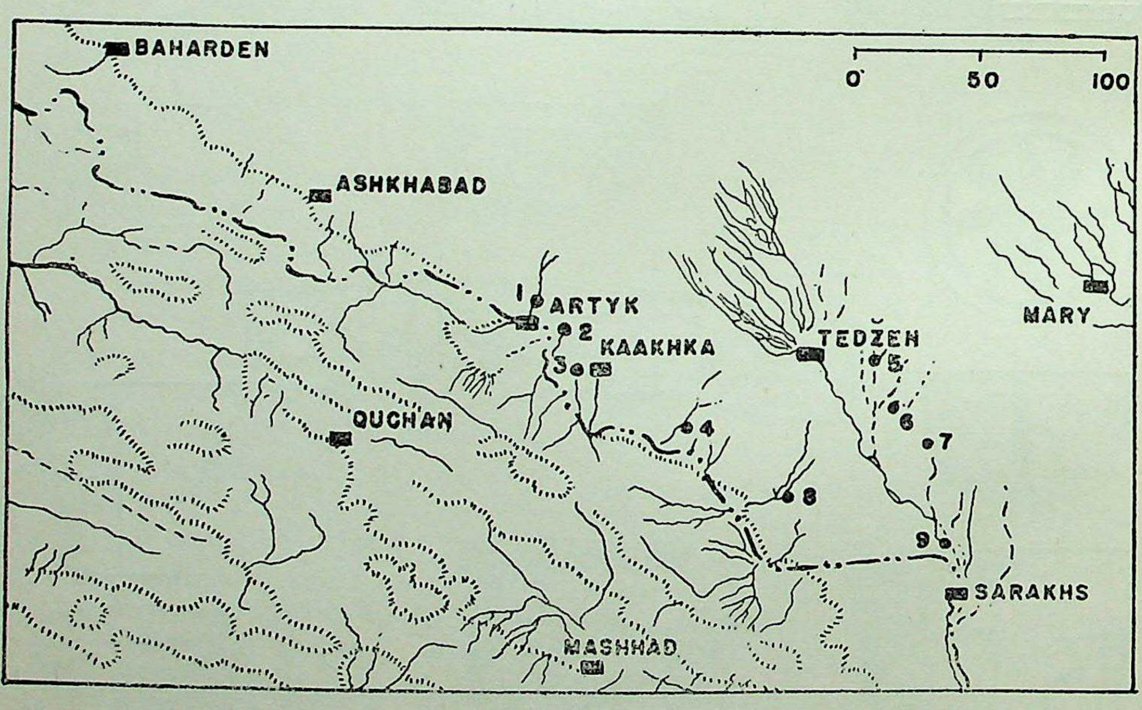


**Fig. M. 2.3. Namazga III (Chalcolithic) Sites**

1. **Kara-Depe**
2. **Gara-Depe**
3. **Namazga-Depe**
4. **Ulug-Depe**
5. **Geoksyur-1**
6. **Chong-Depe**
7. **Khapuz-Depe**
8. **Altin-Depe**
9. **Serahs**

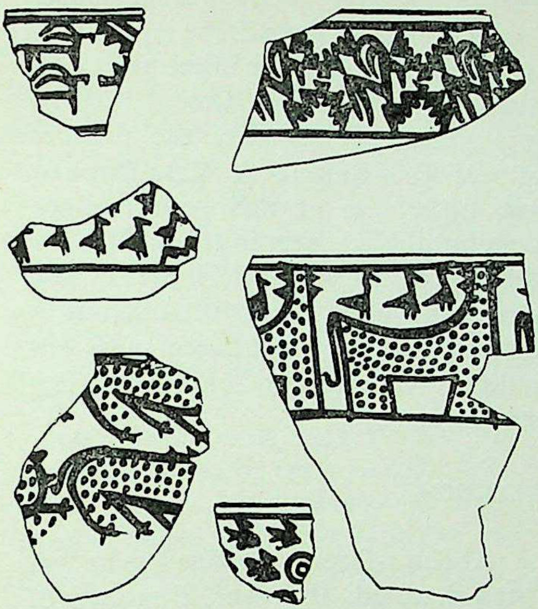


Fig. 2.21. Namazga III zoomorphic motifs on pottery from Kara-Depe

designs along with a limited number of rather spectacular zoomorphic representations (Fig. 2.21) which had no local roots. As a rule, the painted surface covered only the upper half or slightly more area of a pot, usually a deep bowl. The designs, some of which reflect the modified forms of the earlier Geoksyurian motifs, are executed in repetitive panels by well-set hands using very fine brush. However, it also shows the loss of freedom of the artist which marked the Namazga II pottery designs. When human and animal figures are also set in geometric patterns and perfect standards, are evolved the spontaneous creative impulse is lost. But pot-forms were attractive. The pottery types include shallow plates, basins, biconical vessels and hemispherical bowls, sometimes with ribbed exterior.

The kilns are now very much improved (Fig. 2.22) and are grouped together in selected areas of the habitation. The vertical draught kilns had now greater capacity for pots and pans and also higher capacity for the rise of temperature so that firing of pottery became very much improved.

The small number of polychrome sherds that we get at Kara-Depe do not belong to the local tradition of the earlier period, *i.e.*, Namazga II. It is, however, signifieant to note, that it has close resemblance with the Jamdet-Nasr pottery of Mesopotamian sites. The monochrome painted pottery, on the other hand, has been compared, on the basis of painted geometric designs and zoomorphic motifs, with the pottery from Sialk III 4-7 and Hissar Ic-IIa. Similarly, the heraldic eagles of the Kara-Depe painted pottery is comparable with the same motif in Sialk III 4 and other places in south-western Iran. The representations of cows and birds go with the same motifs found at Sialk III and Giyan V in Iran (Masson and Sarianidi 1972, 76). It may be noted that since all these motifs did not exist here earlier, the comparisons are, by and large, valid. In fact, the evidence of pottery has been supported by the changed physical types noted in the burials of this period.

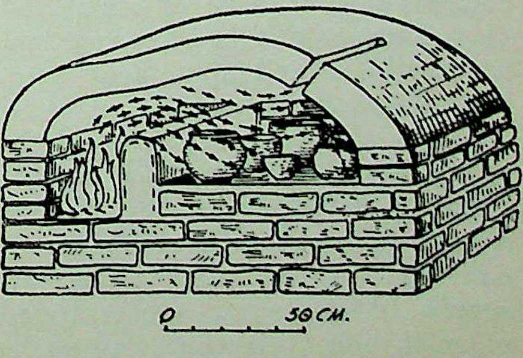


**Fig. 2.22. Reconstruction of pottery-kiln of the Chalcolithic period at Geoksyur**

In this connection Masson also brings to our notice the results of the excavations carried out at Yarim Tepe in north Iran since the material from this site contains a large number of Namazga III items. He feels that Irano-Central Asian contacts were maintained mainly through Yarim Tepe (Masson and Sarianidi 1972, 77). However, the observations made in the context of Late Djeitun are also applicable to this period : the Gorgan Valley and western-most sub-montane region of the Kopet-Dag need a lot more explorations and excavations before a detailed picture of neo-colonization can be reconstructed.

## STRUCTURES

The village of Kara-Depe, of about 1000-1600 people at the peak, now appears to be somewhat pre-planned since houses were found located along narrow lanes which eventually melt at a central place. It was certainly a great improvement over the past. Such a qualitative change was also witnessed in individual houses. A common house was now a multi-chambered unit with its own courtyard which was a distinct departure from the past when only one room house was the common practice. One of the chambers of such a house had a storage bin whose walls as well as the floor were laid with potsherds, probably as water-proofing device. For the rubbish special places were marked on the boundary of the village. It was also a qualitative change since it gives us an insight into the concern that the people showed towards the problems of health and hygine on a collective basis. It has been surmised by the excavators that each of these houses in the village of Kara-Depe accommodated six to eight families united by kinship and economic ties. However, it is difficult to visualize the number of such kinship units at Kara-Depe or any other site of this period since structural differences in the village or differences in physical types in the graves have not been worked out in desired details. The houses may not indicate much but anthropological studies may.

## RELIGION

At Kara-Depe no shrine has as yet been detected. However, fragment of an earthen pot has a painted motif which depicts two human beings flanking an anthropomorphic figure, possibly, a 'deity'. Significantly, some terracotta seated female figurines from the same excavations resemble this deity. Male figurines are also there, but very few; so far, only three examples have come to light. They are shown in the standing pose and they have been discovered from the upper levels of Kara-Depe. At no other Namazga III site such figures occur. Sometimes they are designated as 'priests', although without any valid reason, for their number is very small and each one differs from the other. One extremely interesting piece is a male head covered in helmet with occipital guards and cheek pieces. Down the back falls a serpentine plume. Does it represent a soldier or the priest-king? None knows for certain but undoubtedly it is a master-piece example of art. There is a beautiful alabaster bull statuette also which may have been in use for cult purposes.

Within this overall picture of religious representations lies a variety of terracotta figurines which may emphasize the role of household deities. The figurines, although not large in number, contained female representations more than male. Conceptually, they also belong to the same mother-goddess group which characterized the older groups, but stylistically they differ with them markedly (Fig. 2.23). Thus, one group shows the deity in sitting posture with lowered hands. Of, this, one example comes from a grave. Another group has the same features but without the arms and breasts. A third category is head-less. But probably the fourth category was most popular: body built in a realistic manner but faces pinched showing bird-like features with slanting eyes and rather large noses. Interestingly, the head-dress or coiffures comprise of complicated designs made out of small plaits, locks and S-shaped curls. Whether this iconographic variety reflects a highly developed stage of philosophical understanding of the people or complicated stage of magico-religious practices, we are not in a position to assert, but, undoubtedly, here we perceive a marked stylistic change from the earlier horizons and emphasis on iconographic variety. In itself it is an advancement.

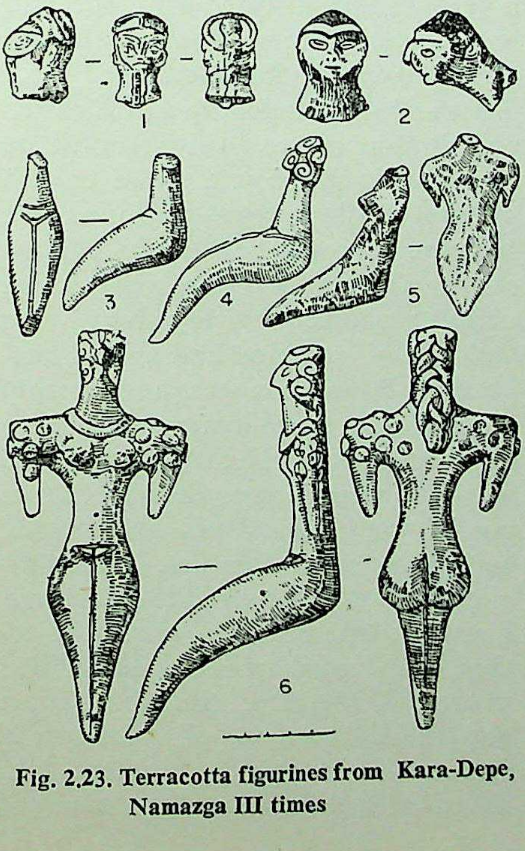


**Fig. 2.23. Terracotta figurines from Kara-Depe, Namazga III times**

Besides the human figurines, there are some animal (pig and cattle) figurines drawn schematically in a crude fashion. Occasionaly, they are painted.

### COPPER OBJECTS

There are not many copper artefacts—only a few fragments of a knife and a few examples of awls and piercers have been found. There are some ornaments also, such as long triangular pins with flat tips and thick butts, rings and bracelets. Obviously, copper must had been a scarce metal used sparingly and valued very high. We know it for certain that the metal was an item of import, possibly from Iran, since copper ore is not found in the Kopet-Dag region (Fig. 2.14a).

### MISCELLANEOUS OBJECTS

The excavations at Kara-Depe have also yielded, for the first time, what has beed called 'seal', of terracotta and stone both. The face bears simple geometric designs. They carry a perforation at the back (Fig. 2.24).

A few bone points with polished

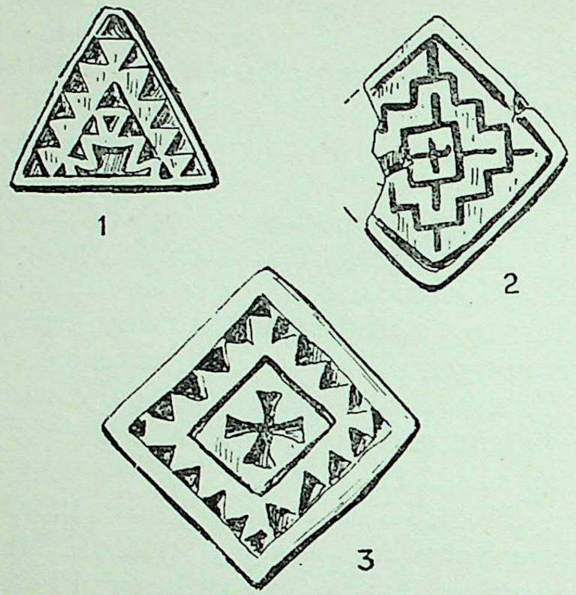


**Fig. 2.24.** **Terracotta seals from Kara-Depe, Namazga III times**

tips and a large number of conical whorls have been interpreted as weaving tools. Certainly, people had travelled a long way from the Djeitun times.

Of pink and white alabaster, sometimes even of grey sandstone, some beautifully carved vessels, occasionally decorated with incised designs, have been found. The technological achievement in handling this material reached such a high degree of perfection that even statutettery was now practised, for example we have now a very skillfully carved bull figure from Kara-Depe. Alabaster was used for making beads, pendants and amulets also some of which have been found from within the graves. The source of alabaster, it may be noted, lies in Iran which is an added proof in favour of close culture-interaction between south Turkmenia and Iran.

Querns, pestles, morters, weights, door-sockets, balls with circumferencial groove, the like of which comes from Hissar, etc., were, however, made of different hard stones available in the mountainous and sub-mountainous regions of south Turkmenia itself.

## The Geoksyurian Complex

The above details from Kara-Depe are so typical of the Late Chalcolithic Culture of Namazga III times that when distant sites, like Geoksyur-1. in the Geoksyur Oasis, were excavated, they also yielded practically the same type of settlement and cultural milieu : multi-roomed houses divided by streets and lanes into separate blocks (Fig. 2.25) ; each house having a number of living rooms, store rooms, work rooms for smithy and pottery making, kitchen in inner courtyard and possibly a family shrine in the form of a small square room with carefully finished entrance and floor. Sometimes it has a small courtyard with a round hearth, a deep depression, 15 cm in depth, 70 cm. in diameter, filled with ashes and surrounded by a low raised wall in the centre which served as altar (public shrine was, however, still of the earlier type—platforms in rectangular rooms) beautifully painted pottery and a few copper and stone objects ; people thriving largely on agricultural produce and animal husbandry. Population was undoubtedly increasing and economic bases were changing. Obviously, social structure was assuming some definite form, possibly on kinship basis and on the basis of extended families, if the implication of the multi-chambered houses assumed by us is correct. Further, a few new dimensions were added to the culture-contact situations. These got added because of wide-spread movement of people in northern Iran as well as the demands which emerged

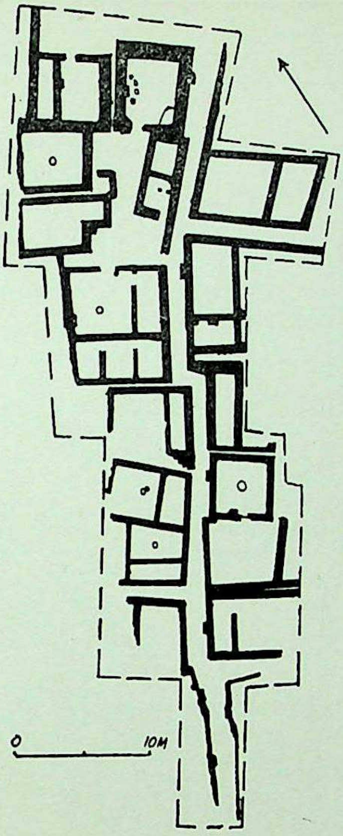


**Fig. 2.25.** Geoksyur-1 : part of the settlement plan, from upper levels; Period : Namazga III. Blocks of houses flanking a winding street

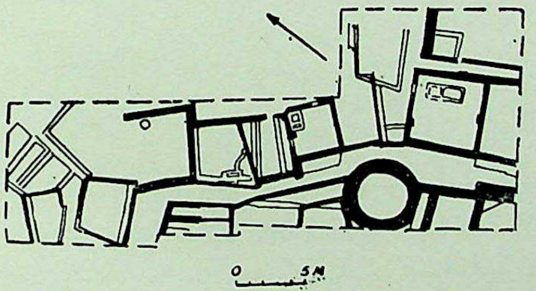


**Fig. 2.25 a.** Akcha-Depe (Geoksyur-2). Plan of the Settlement

out of the necessities of the coming in of the copper and alabaster technology. But this overall uniform picture should not lead us to conclude that there were no regional peculiarities and differences. For example, at Geoksyur 1, at an early stage of the Late Chalcolithic, there was a sudden drop in the number of sites—Mullali-Depe is soon abandoned and people lived only at two sites, Geoksyur 1 and Chong Tepe. Obviously, great hydrological changes were taking place : several deltaic channels were drying up and also shifting their courses due to silting (Fig. 2.26). But even this stage of affairs of the early phase could not continue for a long time. Soon even Geoksyur 1 was abandoned and people moved to Chong-Depe. Later on even this site was abandoned and people moved to an entirely new place, 18

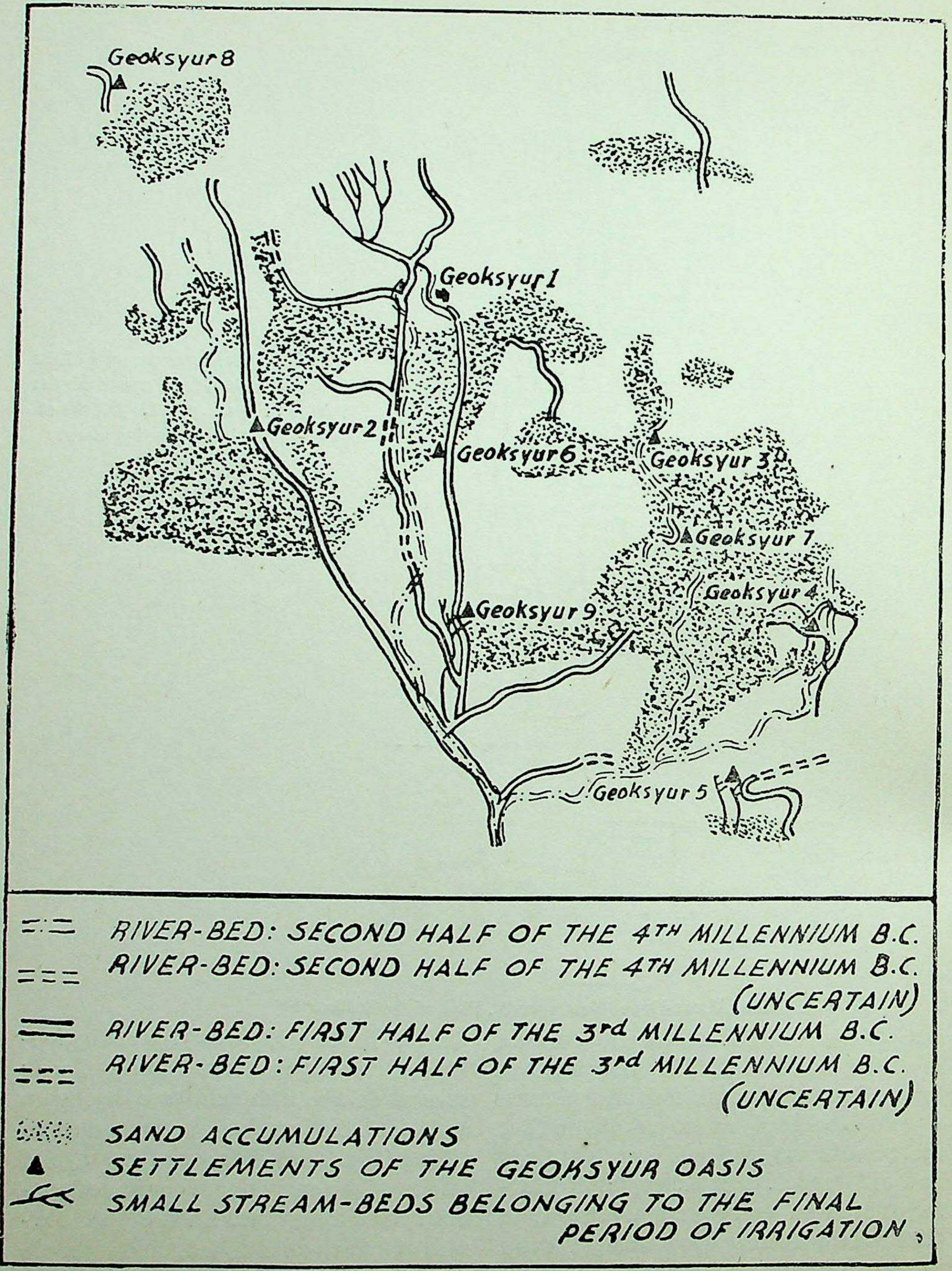

Geoksyur 8
Geoksyur 1
Geoksyur 2
Geoksyur 6
Geoksyur 3
Geoksyur 7
Geoksyur 4
Geoksyur 9
Geoksyur 5
RIVER-BED: SECOND HALF OF THE 4TH MILLENNIUM B.C.
RIVER-BED: SECOND HALF OF THE 4TH MILLENNIUM B.C. (UNCERTAIN)
RIVER-BED: FIRST HALF OF THE 3rd MILLENNIUM B.C.
RIVER-BED: FIRST HALF OF THE 3rd MILLENNIUM B.C. (UNCERTAIN)
SAND ACCUMULATIONS
SETTLEMENTS OF THE GEOKSYUR OASIS
SMALL STREAM-BEDS BELONGING TO THE FINAL PERIOD OF IRRIGATION

**Fig. 2.26.** Hydrological changes in the Geoksyur Oasis. *After Lytsyna*

km. from Chong Depe. It is called Khapuz-Depe or Hapuz-Depe. When this was abandoned the region was never occupied (Fig. 2.27).

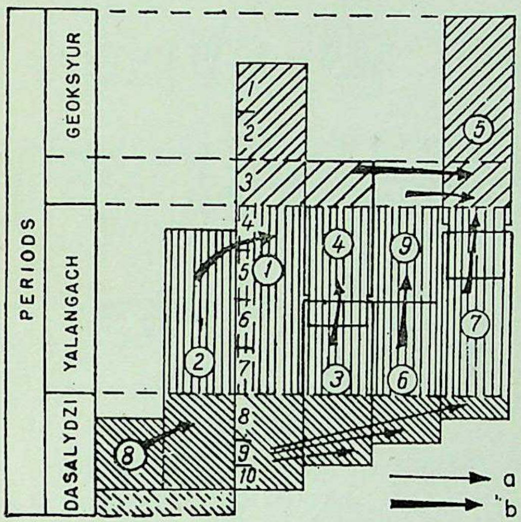


**Fig. 2.27. Outline of the evolution of the population in the Geoksyur Oasis : (a) separation and diffusion ; (b) transmigration. Numbers in circles refer to the Gooksyur sites in the Oasis**

During the Geoksyurian (Late) Chalcolithic, a beautiful painted pottery of polychrome variety appeared. Generally handmade, some of it was wheel-thrown. The kilns made to fire the pots were, however, simple as the evidence of two of them from Geoksyur 1 shows ; it is a single tiered structure with the firing chamber separated from the furnace by a partition. It may be noted that this pottery had absolutely no roots in the polychrome ware of the Middle Chalcolithic. It is a red slipped ware, marked by deep bowls, painted with red and black, or simply black pigment. The designs consist panels of lare crosses enclosed in red of polygons or Maltese Crosses, rhomboids, chequers, triangles, bands with serrated edges (Fig. 2.28), and even zoomorphic representations. The treatment of the figures, it may be noted, has been all along angular and geometric ; curiously enough, even when animal bodies were painted (Fig. 2.29). A limited quantity of plain thin grey ware was, however, also in use. It is to be noted that for the first time a few stemmed pots in this ware appeared since at a later date such pots became popular even in northern Iran. At some other sites in the Geoksyur region, and a little outside also, such as Ulug-Depe and Altin-Depe, the Late Chalcolithic developed certain features which were peculiar to the Geoksyur Oasis, *e.g.*, terracotta human figurines, slightly large in size, with pinched noses. But one group of figurines continued the tradition of the Yalangach period.

The Geoksyurian sites have been very rich in antiquities. Terracotta animal figurines, a variety of ring-stones, spindle whorls, stone arrowheads, beads and pots, bone objects and various types of small copper objects (Figs. 2.30, 31, 31a and 32) are extremely characteristic.

It may not be out of place to quote the views of Masson and Sarianidi (1972, 84-5) that the Geoksyurian painted pottery had only a few motifs which could be traced to the earlier Namazga II, repertoire. On the other hand according to these authors, it has clear-cut affinities with Buff Ware from sites like Tal-i-Bakun in south-western Iran. For example at the lower part of the Geoksyurin bowls are found decorated with parallel lines that cross the centre of the base in a style commonly found at Tal-i-Bakun. Maltese Crosses are also there in both of them and they are of Samarran type. It means, if these similarities are not fortuitous, Iran did play a significant role in the formation of the Late

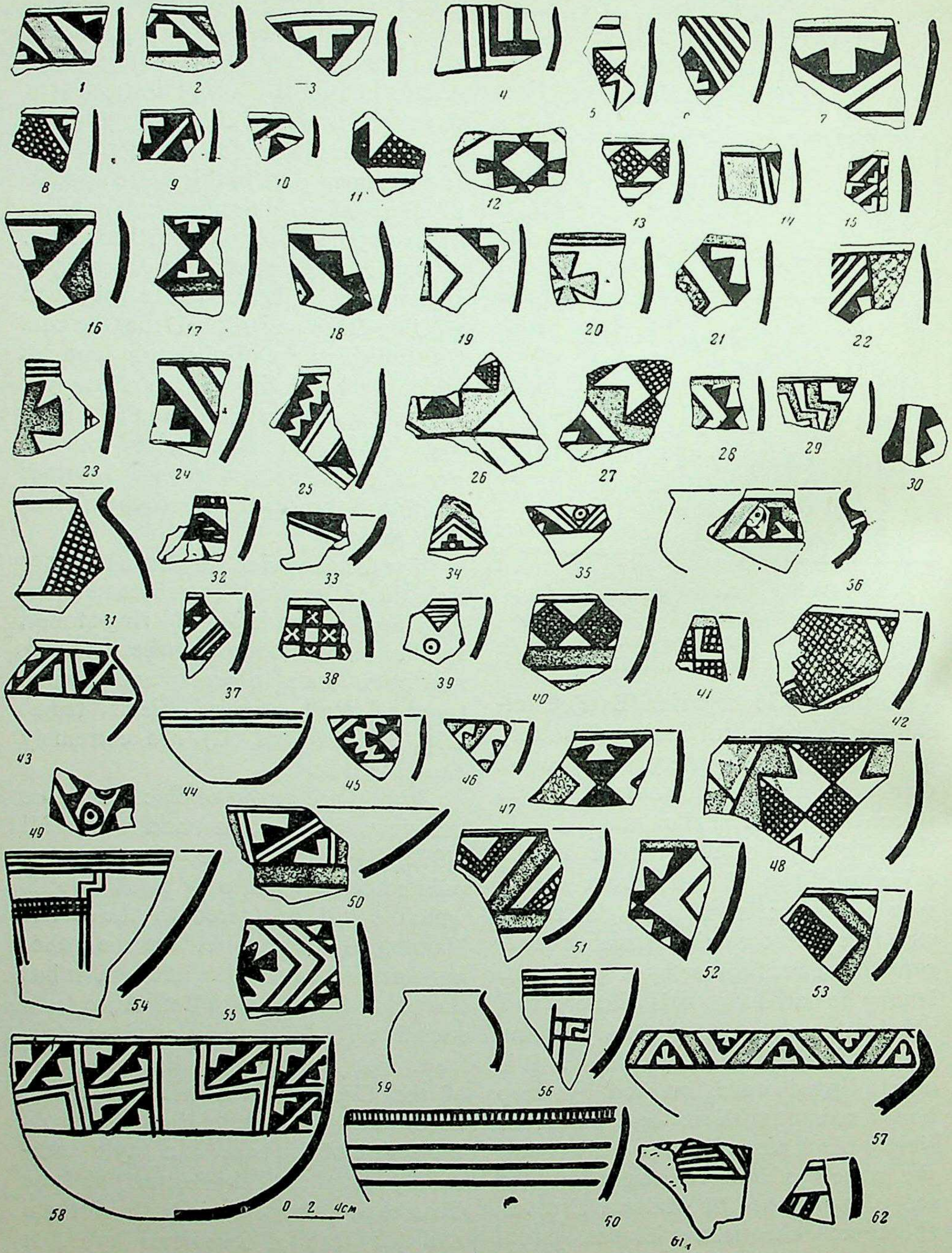

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
0 2 4cm

**Fig. 2.28.** Geoksyur type Pottery : 1-19 from Serakh; 20-30 from Ilginli; 31-42 from Chong-Depe; 43-62 from Chong-Depe phases I to IV. *After Sarianidi.*

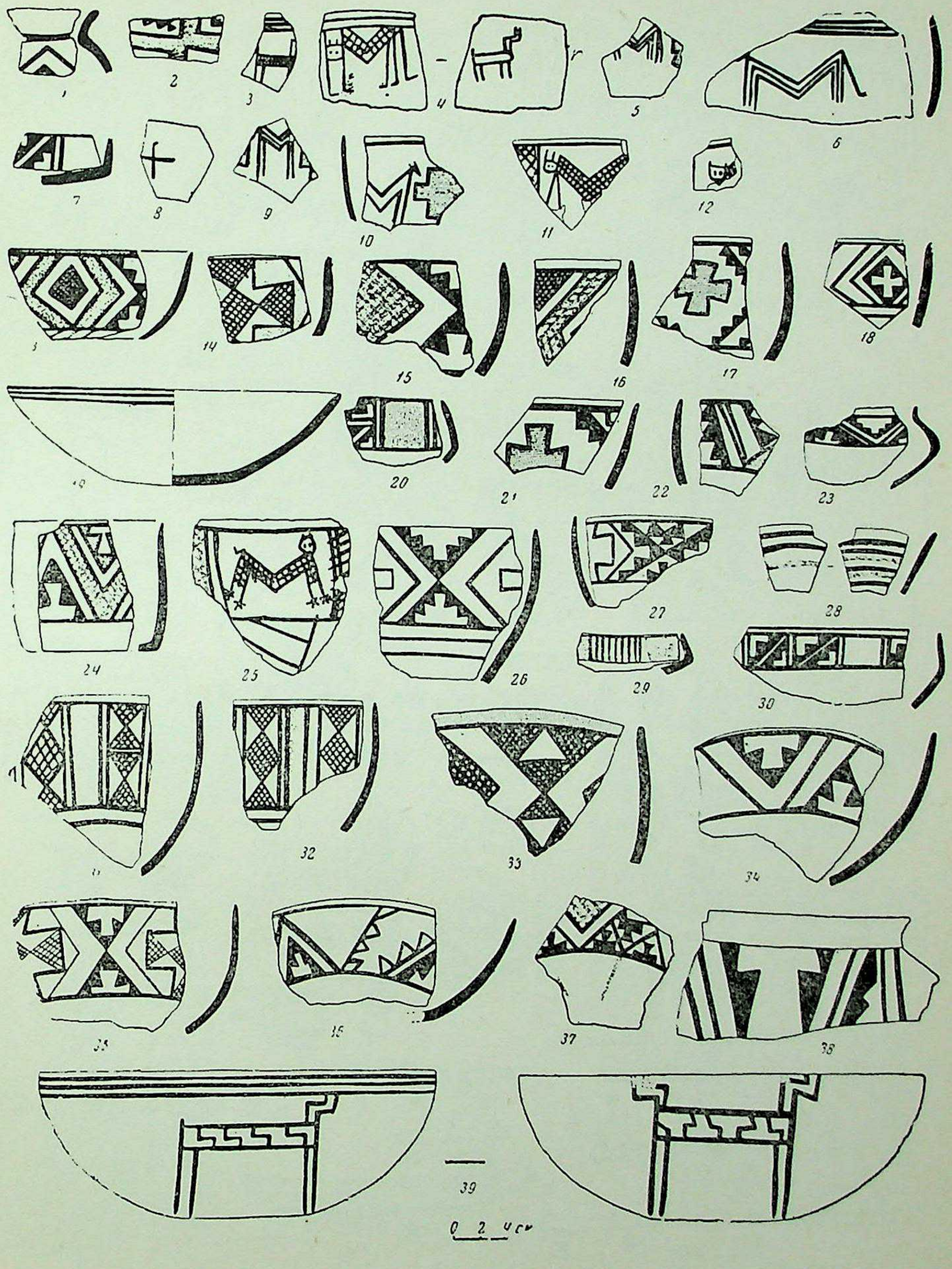

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
0 2 4 cv

**Fig. 2.29. Pottery from Geoksyur-1: 1, 2, 4, 7, 8, 13-39 from dig 1; rest from surface.**
*After Sarianidi*

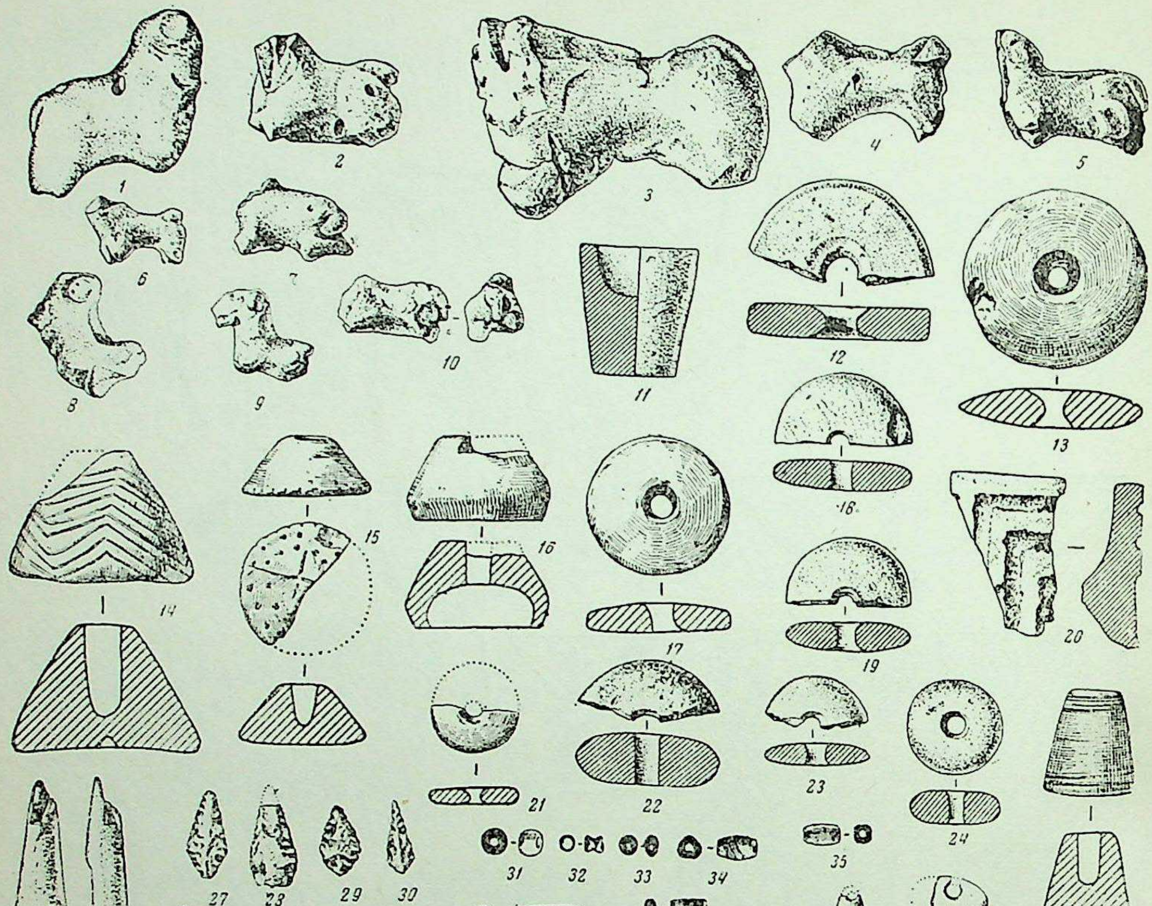

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
0 1 2см

**Fig. 2.30. Objects from Chong-Depe (1-10, 28) and from Geoksyur 1 (11-27, 29-72) : 1-10, 14-16 clay; 11-13, 17-26 stone; 27-30, 40-43 flint; 31-39, 44-46 beads of carnelian and agate; 47-51, 53-72 metal: 52 slate; 73 bone.** *After Sarianidi*

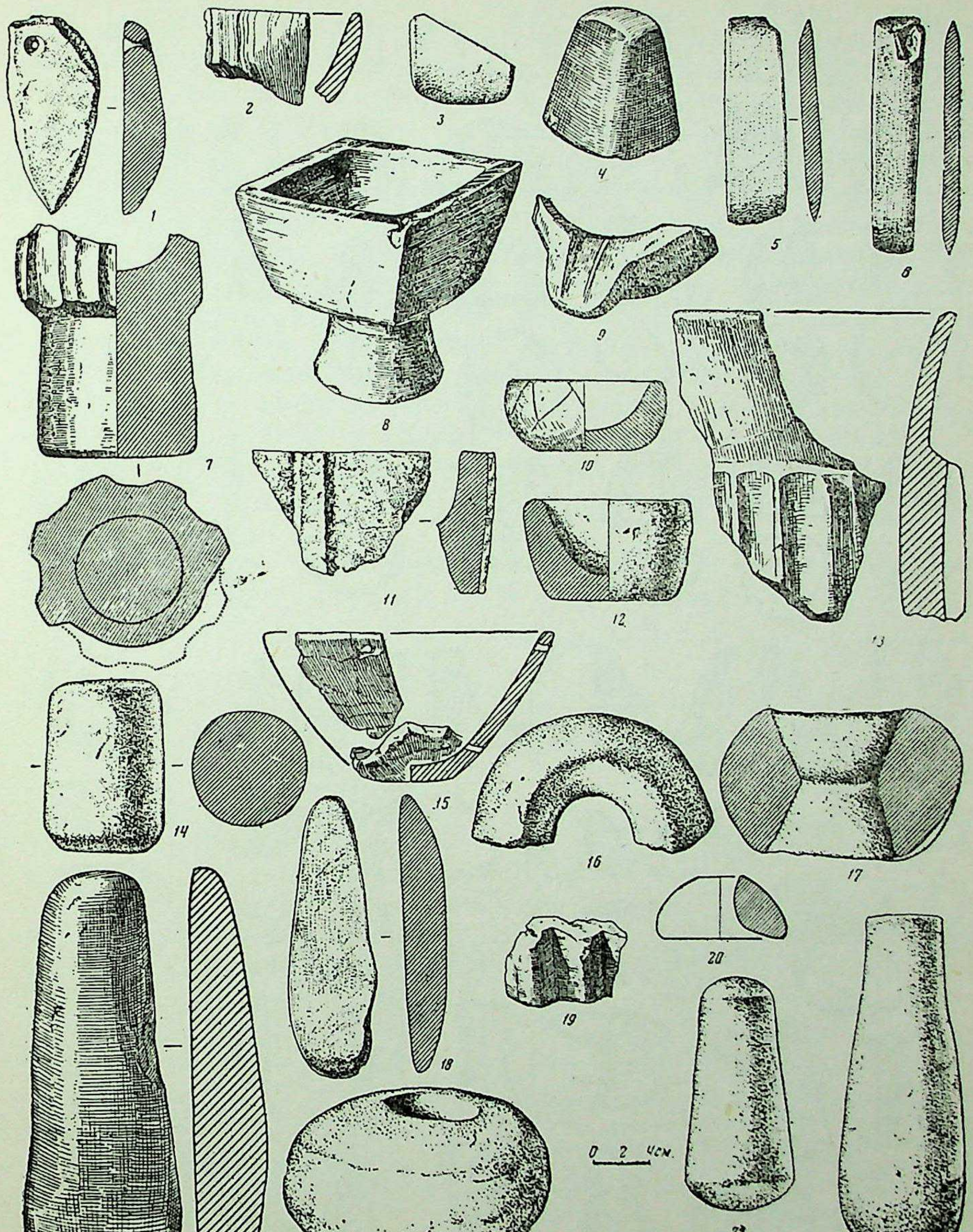

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
0 2 4см.

**Fig. 2.31. Stone objects : 1-13, 15-19, 21, 23 from Geoksyur 1; 14, 20, 22 and 24 from Chong-Depe**
***After Sarianidi***

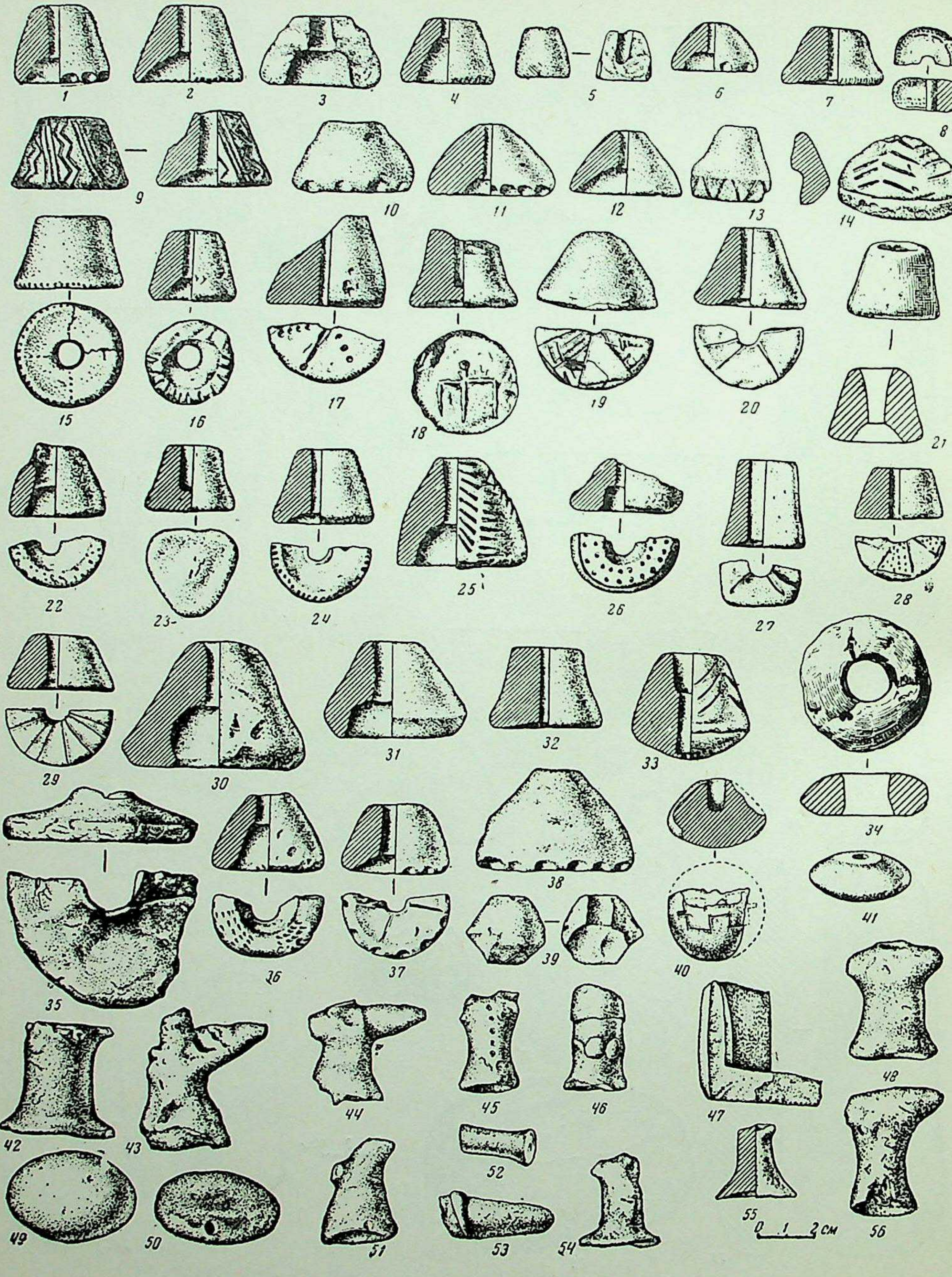

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
0 1 2 см

**Fig. 2.31 a, Clay objects : 1-6, 35, 41-46, 48-56 from Chong-Depe; 7-34, 36-40, 47 from Geoksyur-1.**
*After Sarianidi*

Chalcolithic (Namazga III) of the Geoksyur Oasis ; south-western Iranian traits infiltrated into the Geoksyur region and set the fashion. But these views of Masson and Sarianidi have been thoroughly revised and completely rejected by Khlopin (1974, 70-73) who has step by step traced the origin of all the so-called western Iranian motifs in the pre-existing motifs in south Turkmenia itself (Fig. 2.32). We fully subscribe to these views. In order to appreciate his arguments we will have to look at the problem in historical perspective. Thus 'in all likelihood the decoration of the ceramics of the Namazga I period, taken as a whole, was a local product, even if it is possible that some influence on the formation of certain aspects of that decoration may have come from the communities further south, that is from those peoples living in the territory of what is now northern Iraq and Iran. This decoration is so thoroughly uniform for the whole of southern Turkmenia that one can speak of the absence of a strong cultural differentiation in this period . . . At about the Namazga II period we note an isolation of the eastern districts in the ceramic decoration. In the western region, the mono-

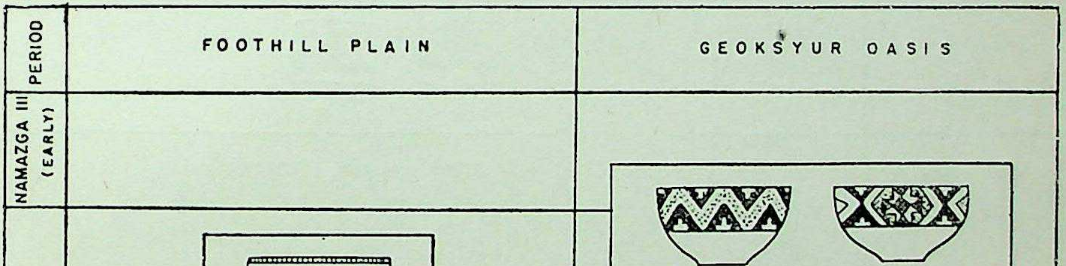


**Fig. 2.32.** **General evolution and interaction of the Chalcolithic pottery (types and painted designs) in different regions of south Turkmenia leading to the formation of the Namazga III pottery of the Geoksyur Oasis.** ***After Khlopin***

chrome patterns of Namazga I type are replaced by polychrome painting of Namazga II type and period; in the eastern region, on the other hand, the Jalangach decorative complex predominates in this period . . . This complex is made up of three parts: degraded motifs of the Namazga I type, imported polychrome painting on pottery of the Namazga II type, and local imitation of the imported polychrome decoration, carried out in one colour only (Fig. 2.33).'

'The polychrome decoration of the Namazga II type continues its evolution in the western region along the line of its natural development, gradually losing its earlier solidity and substan-

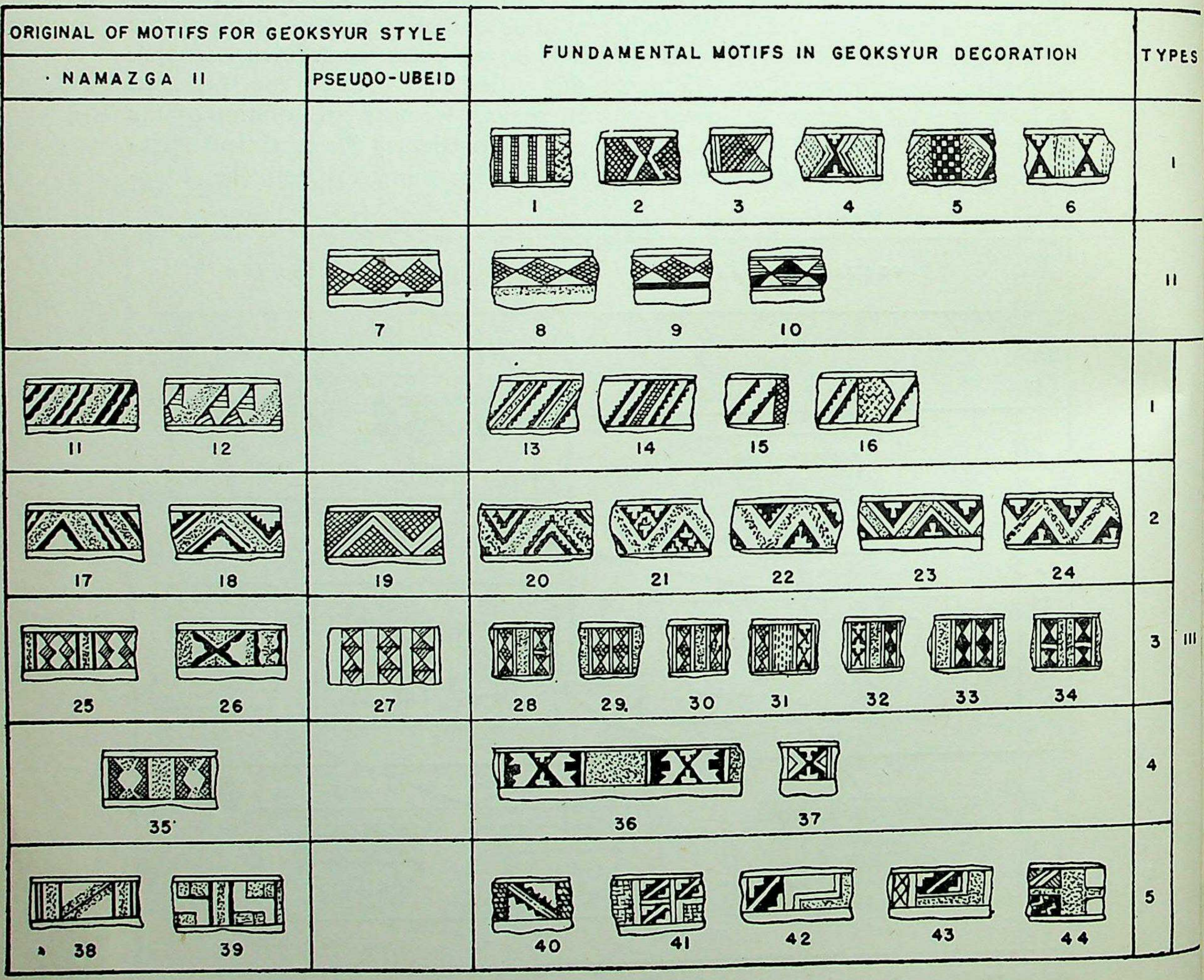

ORIGINAL OF MOTIFS FOR GEOKSYUR STYLE
NAMAZGA II
PSEUDO-UBEID
FUNDAMENTAL MOTIFS IN GEOKSYUR DECORATION
TYPES
1
2
3
4
5
6
I
7
8
9
10
II
11
12
13
14
15
16
1
17
18
19
20
21
22
23
24
2
25
26
27
28
29
30
31
32
33
34
3
III
35
36
37
4
38
39
40
41
42
43
44
5

Fig. 2.33. Origin of the Geometric Designs as found on Geoksyur pottery (Chalcolithic Culture). *After Khlopin*

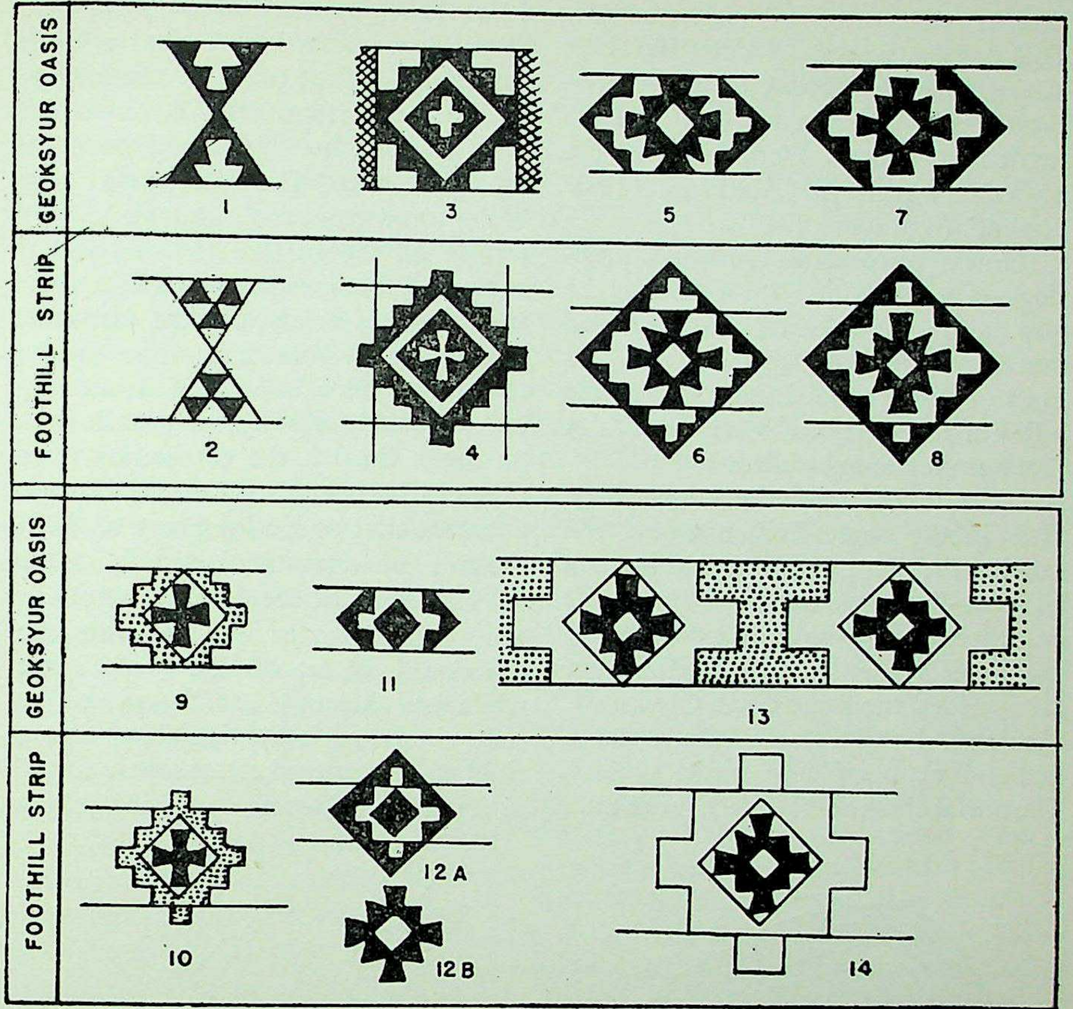


**Fig. 2.34. Outline of the formation of Cross-shaped design; Namazg II.** *After Khlopin*

tiality of design and its original two-colour technique (Fig. 3.34). This process is interrupted by the appearance in the foothill zone of the Kopet Dag of a substantial geometric decoration, of the early Namazga III type, after which there appears a stratum of pottery with zoomorphic decoration and other patterns, a highly particular stratum in the stratigraphic scale of the Southern Turkmenian sites of the Namazga III period.'

'A similar phenomenon takes place in the eastern region too, even if the internal reasons for this phenomenon should perhaps be sought for in various spheres; the Jalangach decorative complex is interrupted, and shortly thereafter gives way to the Geoksyur ploychrome painting. These Geoksyur polychrome motifs, in their original appearance, can at first glance be seen to be completely different from all the other ceramic decoration in Southern Turkmenia; this is why . . they have a completely local origin and are all important for this style of cross motifs. They originated, thanks to the cultural influence of the polychrome decoration of Namazga II type and the monochrome decoration of Namazga III. This decorative system later develops along the path of breaking up of decorative representation and then ends its existence at the introduction of the potter's wheel in Namazga IV-V period.' (Khlopin 1974, 70-73).

Now a word about the burial practices—a section of the Geoksyurian population buried their dead in round family vaults used successively and built of mud-bricks. In the necropolis a few dozen of them were found. A few were rectangular also.

At some other contemporary village sites in the same Tedjen region, but outside the delta, in the foothills, such as Altin-Depe, we have, however, the evidence of only simple pit burials. In the upper Tedjen delta, Khapuz-Depe also yielded the same data. Obviously, Geoksyur 1 was a more stable, stratified and economically sound society. The burial chambers (*tholoi*), more than 30 of them excavated so far, have been found concentrated in cemeteries, each consisting of four to six of them (Fig. 2.35). These cemeteries have always been found in the abandoned parts of the settlement. The chambers were built underground, although partly visible on the surface as a truncated cone. The chamber was reached through an entrance, nicely bricked up. It is interesting to note that some of the cemeteries were separated from the habitational areas by long walls with passages. Clearly, the cemeteries were organically related with the habitation, a feature that goes a long way to show the role of ceremonial burials in the life and death of the people. Family or clan bonds appear to underlie the functional aspect of the *tholoi* since while one skeleton was found in the centre in the perfect articulate position, eight to ten other skeletons were found shifted in a pell-mell condition along

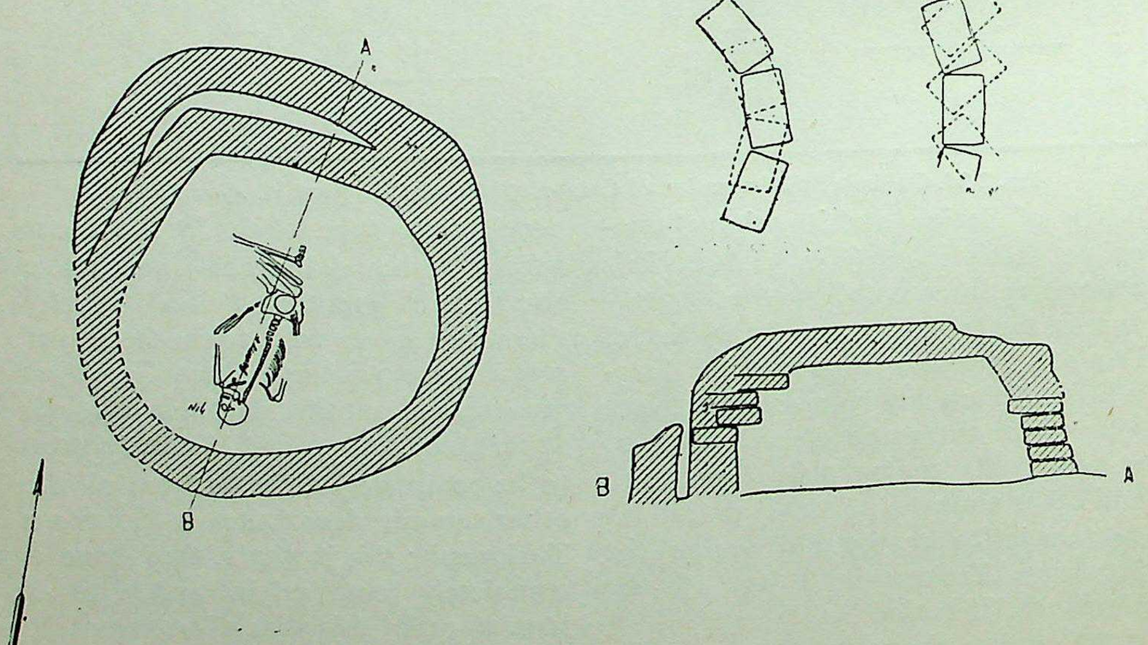


**Fig. 2.35. Geoksyur : Mud-brick grave-structure with single burial**

one of the walls, showing the repeated use of the vaults by the relatives over a period of time. It is only when the vault became full that a new one was built near or over the old one.

Anthropological studies on a cemetery of four burial-chambers show that 59% of the buried were women, 15% men and 26% children. The figure is startling in the sense that the rate of infant mortality was pretty high.

Masson and Sarianidi (1972, 86) in search of the roots of the *tholoi* again reach Susiana, at the village of Ali Abad near Musiana, where rectangular brick-built chamber-tombs with several skeletons have been found. They even mention the collective burials of Susa which resemble the Ali Abad *tholoi*. It is hardly possible since the custom has no parallels in the earlier context and also because Kara-Depe, a site in the Central zone, has also yielded the evidence of burial chambers. However, their theory implies the arrival of a new people and add strength to their theory that the polychrome Geoksyurian of Namazga III also owes a lot to the Iranian people. But, unfortunately, their theory would also imply that although the sepulchral practices came from Susiana the pottery tradition came from the south-west since Susiana has nothing to offer which may be included in the category of Geoksyurian motifs. We, therefore, feel that taken the period as a whole, the generalized influence of individual Iranian traits was a reality and not Iranian 'invasion' or 'colonization'. The practice of *tholoi* is equally taken to be a south Iranian practice although it is also a moot point. However, during the earlier period (Yalangach) none of the sites yielded any grave.

Masson and Sarianidi (1972, 85) have also tried to work-out connections of the Geoksyurian objects with southern Mesopotamian seal amulets, pottery, figurines, long copper-pins, etc. In this context they have particularly mentioned the Ubaidian pottery of Tepe-Gawra. Diyala valley also figures in this category; of course, only as far as the representation of male figurines holding animals are concerned. But it appears that the Iraqo-Iranian influence and trait-infiltration have been more of a generalized kind due to occasional culture-contact situations than 'specific-culture' invasion. Changes do not always take place under foreign domination, they also occur under local permutations and combinations and get accelerated either under some dynamic leadership or else in some culture-contact situation. The culture-contact situation may be the outcome of two-way traffic, and, therefore, intensive, or casual and marginal leading to, what Mortimer Wheeler once said 'ideas have wings'; they, in fact, act as stimulants. In the present context the latter appears to be the case.

The Tedjen delta, during the last phase of Namazga III, started silting up and the established channels changed their courses often and on (Lytsyna 1965). In the past the people had evolved the system of canal irrigation, but now even that was not going to be effective. Undoubtedly, the river suffered a great hydrological pressure, under neotectonic phenomenon (Fig. 2.36) in the Turanian plain. The fertile delta that once witnessed the ever-flowing channels now found itself almost dry. In fact, the delta shifted towards the south, a lot upstream, on

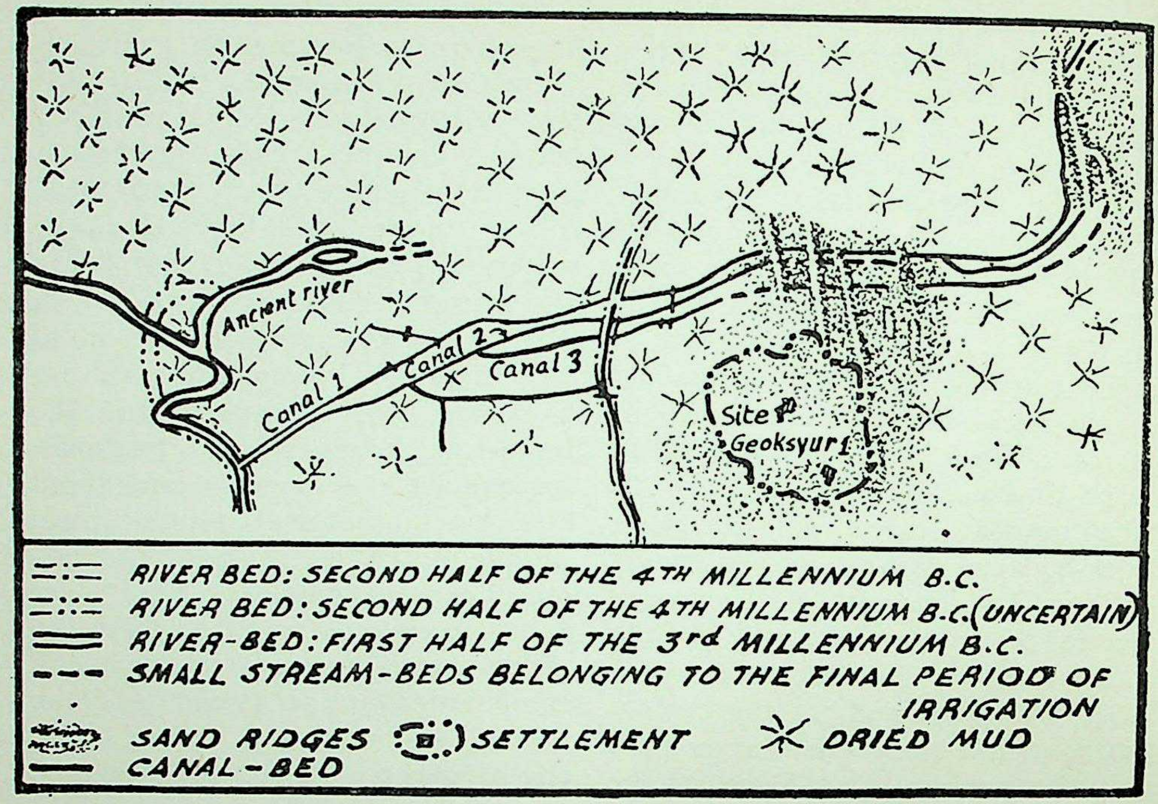

Ancient river
Canal 1
Canal 2
Canal 3
Site
Geoksyur 1
RIVER BED: SECOND HALF OF THE 4TH MILLENNIUM B.C.
RIVER BED: SECOND HALF OF THE 4TH MILLENNIUM B.C. (UNCERTAIN)
RIVER-BED: FIRST HALF OF THE 3rd MILLENNIUM B.C.
SMALL STREAM-BEDS BELONGING TO THE FINAL PERIOD OF IRRIGATION
SAND RIDGES
SETTLEMENT
DRIED MUD
CANAL-BED

**Fig. 2.36. Shifting pattern of irrigational canals in the Geoksyur Oasis.** *After Lytsyna*

the borders of Iran, near the modern town of Serakhs. What could now be expected of the people except abandoning the sites and moving into new areas. But which were these new areas to where they moved? We will come to it later. The story of colonisation of the Tadjen delta which started with three sites in late Namazga I times and developed with eight sites in Namazga II times now ended with only two sites in Namazga III times (Fig. 2.37). Due to the deltaic nature of the Geoksyur oasis the sites were deserted often and on as said earlier but Geoksyur-1 was practically in constant occupation through the three periods. This seems to have been some sort of a capital town towards which every year and for all time people looked for life-giving sap.

## THE INDIAN BORDERLANDS

The chalcolithic culture of south Turkmenia has, in recent years, created a lot of interest amongst archaeologists dealing with West Asian and South Asian archaeology. Much of the thought has been given to two basic problems: the origin and the diffusion. Dealing with the first problem, specific correlations with Iranian and Mesopotamian sites have been worked out by Masson and Sarianidi (1972) and Sarianidi (1973). Dealing with the second problem, Casal (1961) and Tosi (1973-74 and 1978) have brought to light some specific correlations with a few Afghan (Mundigak) and Siestan (Shahr-i Sokhta) sites. Since Mundigak and Sokhta fall within the Indian borderlands we will deal

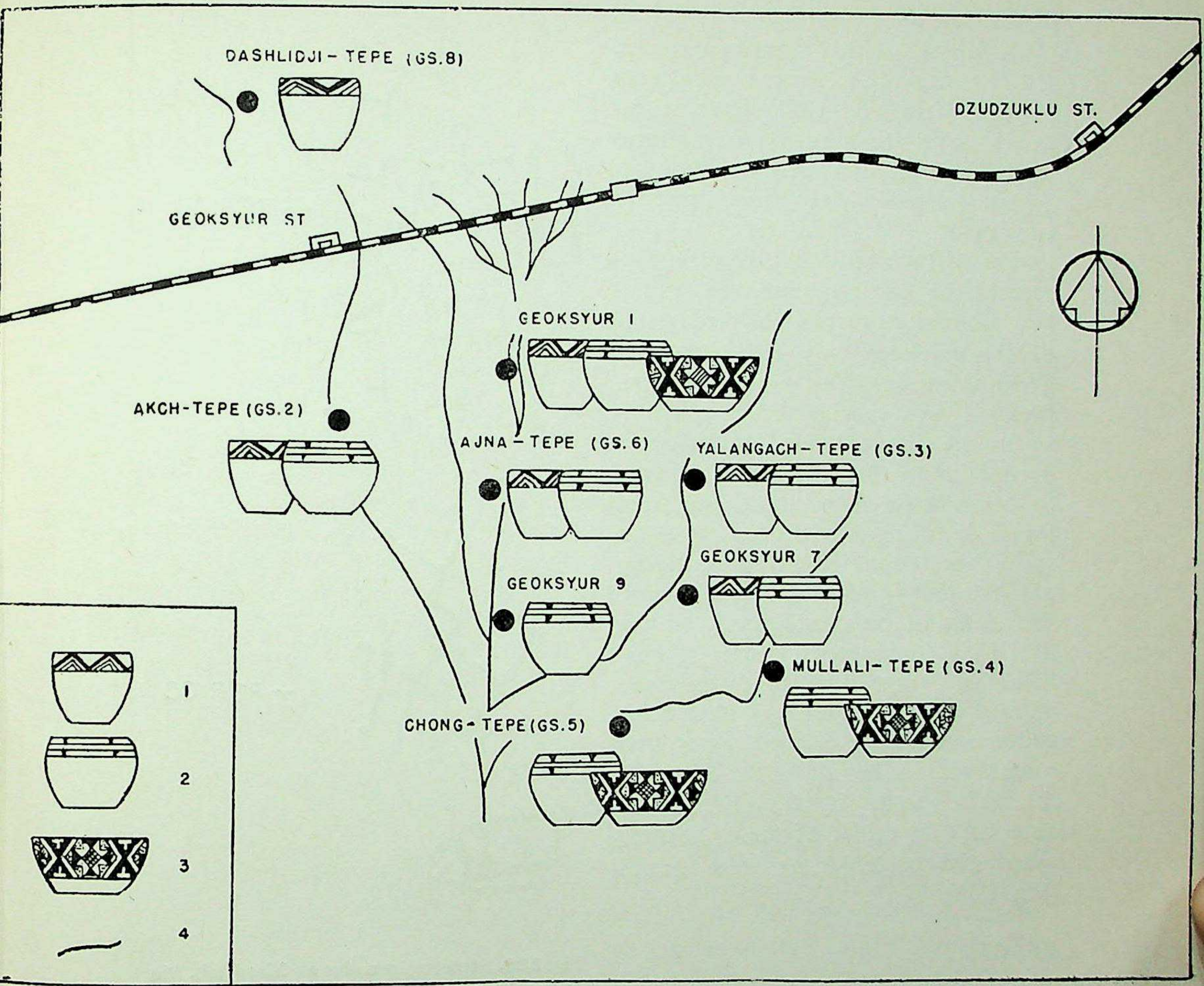

DASHLIDJI - TEPE (GS.8)
DZUDZUKLU ST.
GEOKSYUR ST
GEOKSYUR I
AKCH-TEPE (GS.2)
AJNA - TEPE (GS.6)
YALANGACH - TEPE (GS.3)
GEOKSYUR 7
GEOKSYUR 9
MULLALI - TEPE (GS.4)
CHONG - TEPE (GS.5)
1
2
3
4

**Fig. 2.37. Different Chalcolithic cultural levels represented at individual Geoksyur sites in the Geoksyur Oasis. Each culture is represented by its typical pot-form with typical painted designs. 1. Dashlidji Period Culture. 2. Yalangach Period Culture. 3. Geoksyur Period Culture. 4. denotes channels of the Tedjen river.** *After Khlopin*

with them in details. The idea is to place the individual items of painted designs of pottery, terracotta figurines, etc. in the total perspective of different cultural horizons through which these two sites passed during the third millennium B.C. We felt that without these details, our assessment of the quantum and nature of culture interaction between south Turkmenia and the Indian borderlands, may result into lop-sidedness.

### MUNDIGAK

The site is located in the Kishk-i Nakhod Valley to the north of the Kandhar City in southern Afghanistan.

From time immemorial it was joined with Herat with caravan routes. Casal's excavations for ten years (from April 1951 to April 1960) have revealed a complete sequence of cultures spreading over seven periods, although for our purposes lower four alone are important.

Period I with five sub-periods represents the earliest settlement. First two sub-periods or phases have yielded the evidence only of post-holes which may be indicative of huts alone. Phase 3 was crucial. From now onwards the site remained in constant occupation by those who built houses, to begin with, of piśe, later on, from Phase 4, of mud-bricks arranged on stone foundation. The houses, during phases 3 and 4, were, of course, small, consisting of only one room with a hearth in the centre. Phase 5 was, however, a stage at which a real take off took place : the houses were rectangular, sometimes divided into two rooms with a hearth in the centre of the main room. It is significant to note that in midst of these houses, ovens and pottery-kilns were made (Fig. 2.38).

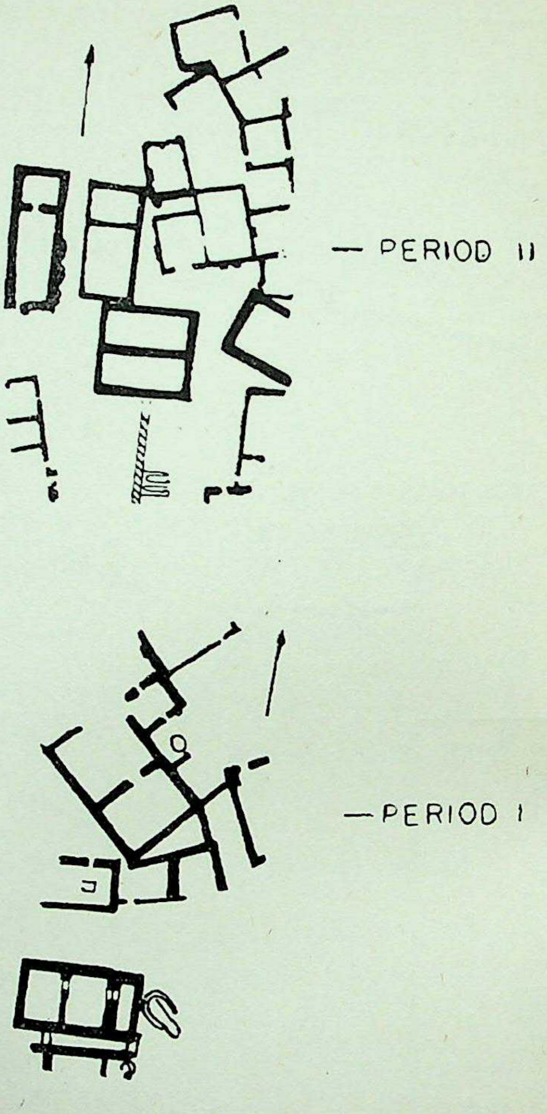


**Fig. 2.38. Structural remains at Mundigak. Mark the progressive enlargement of the houses and the settlement**

### *PERIOD I*

According to the excavator, it exhibits traits of a rather developed stage of culture, thus foreign. The pottery, handmade black-on-red, from phases 2 and 3, has similarity with the pottery found at Kile Gul Mohammad in the nearby Quetta Valley. However, the Kile pottery is wheelmade and exhibits close parallels with Chashma Ali (northern Iran) pottery. In fact, in phases 4 and 5 typical Kile pottery is found, decorated even with black and red polychrome designs of the Kechi Beg (Quetta) type, which in turn is traced to Hissar early levels.

Clay figurines of cattle start appearing in phase 3 while of human beings in phase 4.

Significantly enough, both copper and alabaster were used right from phase 2, which made Casal think that the culture came to the site in the fully blown up stage.

## *PERIOD II*

It has been divided into three phases, the last, no. 3, has been further divided into a and b. Phases 1 and 2 continue the domestic architecture of Period I—two roomed houses. However, the habitation was now denser. The rooms, now of two different sizes—2×4.5 m and 4-5×6 m—were connected with an interior door. A deep well was also found in the habitation. The phase 3 houses were, however, doorless.

The pottery, surprisingly enough, was now somewhat cruder than that of period I although some pots were painted and some were of new forms (Fig. 2.38a).

The other cultural items include bone points, cone-shaped spindle whorls, lenticular stone arrowheads, beads, sling stones and a crude stone button seal.

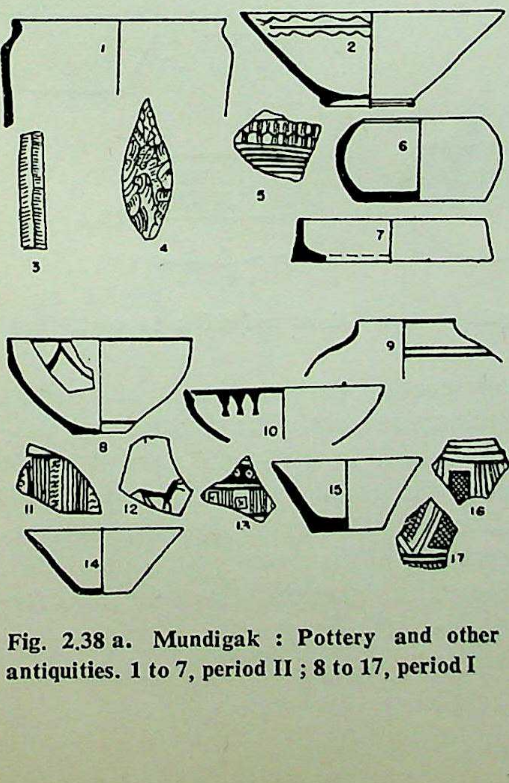


**Fig. 2.38 a. Mundigak : Pottery and other antiquities. 1 to 7, period II ; 8 to 17, period I**

## *PERIOD III*

It has been divided into six phases, although in totality it gives a picture of a somewhat developed stage of culture, which we may call 'protourban'. Slowly and gradually, wheelmade pottery reduced the percentage of the handmade ware, to mere 15% in phase 6. The pottery shows an exhuberance in painted designs, some of which, significantly enough, bear close parallels with the Namazga III patterns, Sokhta III patterns, Early Indus patterns, Middle and Late Hissar patterns and Damb Sadaat II-III or Quetta (Piggott 1947) patterns (Fig. 2.38b). Undoubtedly, this was the period in which various cultures located in the vast regions of South Asia seem to have come closer to each other, directly or through intermediaries.

Domestic architecture remained basically the same as in Pd. II but now with more rooms, up to five, some with windows. The wells were also there. In a phase 4 house an earthen bench went along three sides of an interior wall. In phase 6, a large house with several rooms, although arranged haphzardly, has been found. Interestingly, an intramural grave was also found.

The moveable small antiquities include two kinds of bronze shaft-holed axes from phase 6. Compartmented stone stamp-seals and rectangular clay seals with simple cross motif, and fiddle-shaped terracotta female figurines from phases 1 and 2 are also quite interesting. It may be noted that the cone-shaped spindle-whorls of Pd. II were now replaced by disc-shaped ones.

But, possibly, the most notable item of this period is the discovery of a

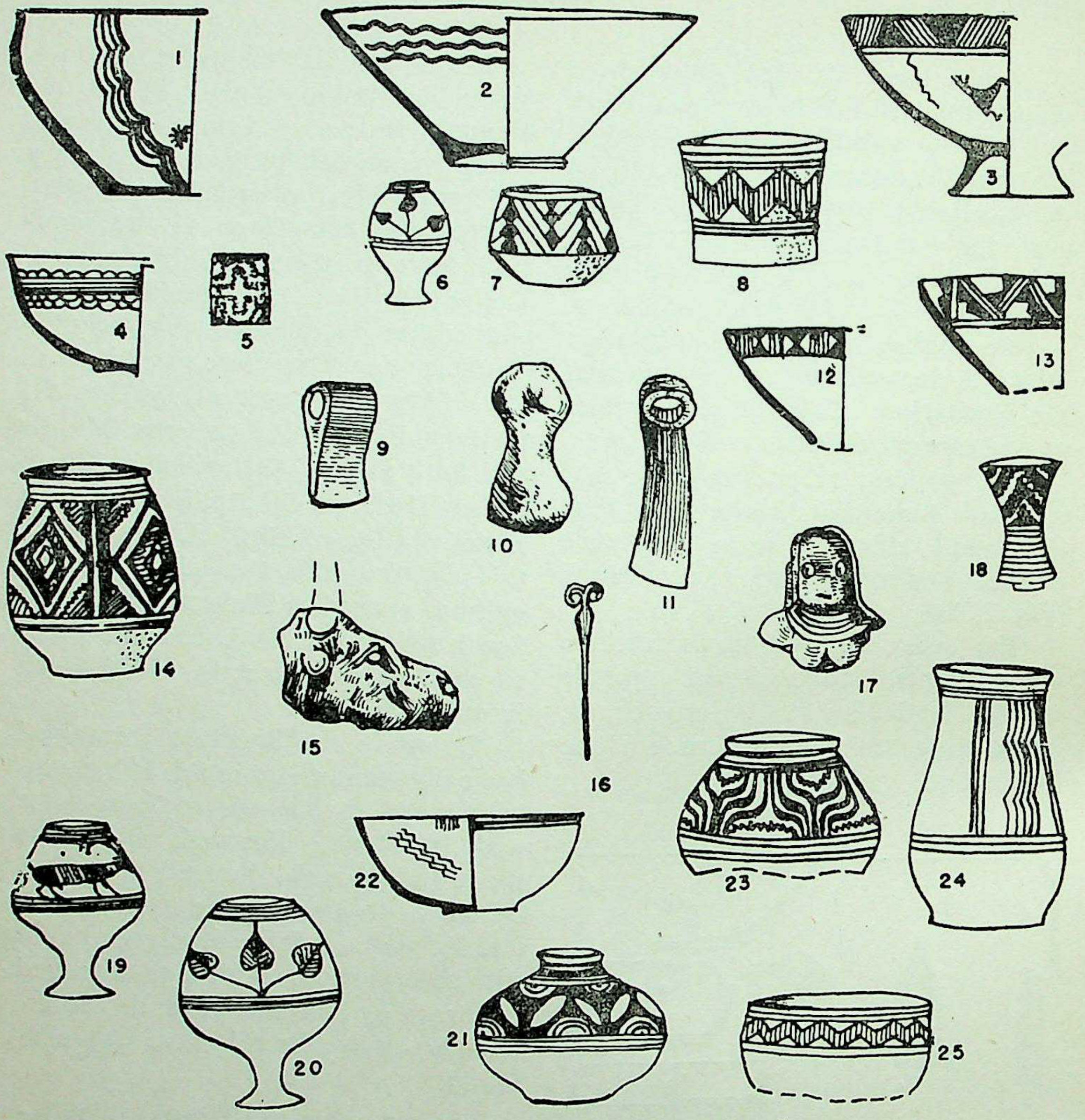


**Fig. 2.38b. Mundigak. Pottery and other antiquities. 1 to 13 from period III; 14 to 25 from period IV**

number of graves in Section C of the main site. The earliest of them have yielded highly crouched skeletons in irregular shaped pits. Except for a piece of ground stone, they yielded no offerings. But possibly the most significant examples came from phase 6. They are ossuary or collective burials, each containing the skeletal remains of several persons in a brick-lined rectangular cist. The bones were usually found in pell-mell condition. It may be noted that in practically all examples the heads were found separate from the body. The excavator, therefore, grouped them in two categories : (1) Fractional in which dead body was defleshed elsewhere, and (2) burial of partially cut corpses or of parts of corpses. By and large, these were also devoid of offerings.

### *PERIOD IV*

It may be called the ‘Urban Phase’ of Mundigak, marked by a large population covering the entire area of the sites and monumental structures, such as the palace and temple. It may, however, be mentioned that there was a complete continuity between periods III and IV as is evident from the terracotta figurines, seals, pottery and other objects.

The two mounmental structures referred to (Fig. 2.38 c) were together enclosed by a fortification with ‘bastions’ although, according to Fairservis (1971 : 130-31), “they are essentially units of small compartments connecting with one another and apparently once inhabited. The main wall was made up of an inner and other wall with a passage between (*ca* 2 metres). The outer wall was about 1·20 metres thick and reinforced on the exterior by rectangular buttresses of brick. The inner wall was thinner, 1 to ·75 metres. The walls’ foundations were dry stone set in a mud or clay morter to a height of about 1 metre. On this the main brickstructure was constructed. There are traces of steps. The bastions were placed at angles to the main wall and other exterior faces were buttressed in a similar fashion. The main wall was traced for almost three hundred metres.”

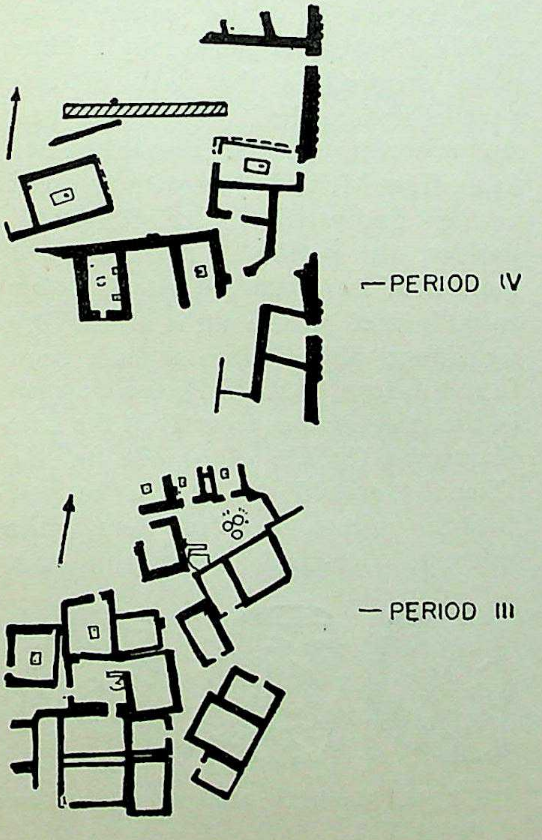


**Fig. 2.38c. Plan of structural remains at Mundigak**

Some 200 m to the east of this area (called Tepe G) was located a very elaborate structure which is supposed to be a temple-complex. It was found enclosed by a compartmented wall faced with toothlike buttresses or decorative elements. Inside the enclosure, but separated from the wall by a passage, a complex building of several rectangular rooms, some six to seven metre in length, with hearths, was located. In its western part was a very significant structure : in the southeast corner was a square block of masonry against which were made at least two benches. The block and the benches both were plastered or painted white. Along the eastern wall was another bench plastered in the same colour. On the western side one more bench was located. In the centre of this room stood a large rectangular hearth somewhat elevated and painted red on its sides. This room opened in a courtyard on its west. Here also a hearth with ash, oval in shape and somewhat elevated, was found. A drain of fitted pottery units was found emerging from the hearth chamber, following the slope of the courtyard, and ending at the foot of the enclosure wall.

On the high part or the mound, called Tepe A, the excavator located what is known as the Palace of Mundigak. Although largely eroded due to erosion, it is found quite elaborate which witnessed at least three renovations in her life-time. The outer face of the brick-laid Palace wall is extremely characteristic, it has a corrugated appearance which resulted from the unrolling of 'colonnade', or half cylinders of bricks, topped by a brick frieze of step design. It was also plastered white. The structure appears to have been fronting a court, possibly paved with bricks. It had a series of rooms and small court, some of which had their own hearths. During the latest renovation, the third, long rectangular structures were erected in front of the colonnade in the northern court. Interestingly enough, in these structures were found the remains of staircases leading to now vanished structures, niches as well as drains, all of which may suggest (Fairservis 1971 : 132) that it was a grand public building, although the excavator feels that it was meant for defense, on the grounds that it yielded sling-pellets and arrowheads and it bears signs of complete burning.

Behind the old colonnade, a five metre thick massive platform of bricks, with a wall at its back was found. Access through the old colonnade was still there by entering a small chamber in the west. It led to a stairway on to the platform. Traces of a new colonnade, emulating the old one, on the southern side of the platform were also found. An entrance through this colonnade to small closed rooms on the south was located.

Period IV has yielded pottery which is now marked by some new tendencies, such as the use of faunal and floral motifs, along with the old as well as some new geometric patterns. Thus, goats with long horns and hatched body, a group of three pipal leaves with hatching inside, occur along with the characteristic Namazga III stepped pyramids, oblique stair-case, chain of half brackets (similar to Djeitun pattern), 'eyes with crescents', etc.

The so-called Zhob mother-goddess also appears. In these levels was also found a very remarkable piece of male head carved in white calcite (Fig. 2.38d). The head is marked by a hair-band dropped in the back in two parallel ribbons the like of which one can see occurring on the famous bearded figure from Mohenjodaro with an upper garment decorated with trefoil pattern. Besides, the period is marked by a number of stone stamp-seals. A double spiral headed bronze pin is also a very significant object since it has been found in Iran, south Turkmenia as also in the Indus plains, recently at the Late Harappan (?) site of Manda on the Chenab (Joshi 1978). The other copper/bronze objects included items like mirrors, lance-heads, hooks and pins.

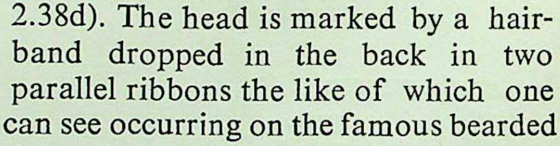


**Fig. 2.38d. Mundigak : Male stone head from Period IV (3)**

The stone objects include besides several items, vessels carved with geometric designs familiar on the painted pottery. There are a number of alabaster vessels also throughout the Indian borderlands as well as the Indus plains. Of the Quetta Valley type, we have from this site a number of clay model-houses.

At a very late stage, during the Iron Age, the latest (Period VII), granaries were also found at the site, but they belong to a very late date.

Mundigak, it may, therefore, be clearly borne in mind, has yielded the evidence of a culture that slowly and gradually developed from a small village to a big town or city and, therefore, represents the capital town of another autonomous State or Culture-area. It shared a lot with its neighbours, yet it remained a typical product of its own hilly environment which contrasted with those located in Siestan, Turkmenia and the Indus plains. The somewhat detailed treatment given to this site is precisely to bring home this point.

### SHAHR-I SOKHTA

Shahr-i Sokhta or 'Burnt City' located in the centre of Iranian Siestan, was one of the most prominent proto-urban settlements of the third millennium South Asia. Its systematic excavations during the last one decade (Tosi in Tucci 1978) has brought to light the entire history of this town which goes back to 3200 B.C. and comes down to 1800 B.C. During the 1400 years of its existence, it passed through four major cultural periods.

It may, however, be mentioned that in spite of its horizontal expansion and a net-work of cultural and economic interactions with the neighbouring regions, Shahr-i Sokhta had 'no ziggurat acropolis, no enclosure walls or monumental gateways nor public building or such structures as may be connected with a specific function.' It could not reach the height of urban civilization which characterized Mesopotamia and the Indus Valley. In its overall character, it was nearer to the south Turkmenian protourban settlements like Altin-Depe and Namazga-Depe, although these sites are marked by at least onepublic structure each, aziggurat at Altin-Depe a temple and watch-tower complex at Namazga-Depe.

In its culturalo-economic interaction with the neighbouring regions, there is the evidence in favour of south Turkmenia, Badakshan (Afghanistan), northern and Central Baluchistan, southern Iran, Elam and, possibly, Mesopotamia. Spurprisingly enough, so far, no specific evidence of its contacts with the Harappa Culture has come to light.

#### *PERIOD I (3200-2900 B.C.)*

The dating of this period is more or less secured. From level 10, the lowest, a tablet incribed in proto-Elamite characters of the Susa type

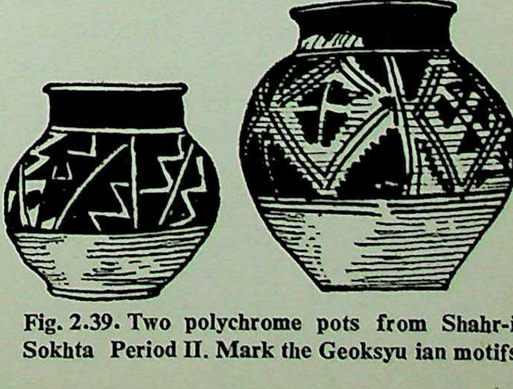


**Fig. 2.39. Two polychrome pots from Shahr-i Sokhta Period II. Mark the Geoksyu ian motifs**

| *Some special features* | *Dates in B.C.* | *Period* | *Cultural Stage* | *Levels or Cultural horizons* | *Area covered* |
|---|---|---|---|---|---|
| | 1800<br>1900<br>2000 | IV | Decline of the City<br>Post-urban Phase | 0<br>1<br>2 | 5 hectre |
| Introduction of fast wheel turned pottery | 2000<br>2200<br>........<br>2300<br>2400 | III | Maximum growth of the Settlement but decline in culture | 3<br>4 | 80 hectre |
| Destruction of settlement due to fire | 2500<br>.......<br>2600<br>.......<br>2700<br>2800 | II | Proto-urban settlement. Long distance trade. Maximum growth in culture | 5<br>6<br>7 | 5 hectre |
| | 2900<br>3000<br>3100<br>3200 | I | Proto-literate Phase<br>Formative stage | 8<br>9<br>10 | 15.5 hectre |

going back to 3200 B.C. was recovered. Twenty seal-impressions of proto-Elamite seals have also been found in level 10. A $^{14}C$ date of this level is (TUNC-61) 3222±95 B.C.

This appears to be the period in which people from south Turkmenian sites and, also Mundigak in south Afghanistan, moved in and colonised the delta of the Helmand river. About 40% of the total material, including painted pottery, appears to belong to Namazga III-Mundigak III complex.

Belonging to this period, we have the evidence of only single-roomed houses with flat roof and stretches of walls of mud-bricks measuring 40×20 ×10 cm. The doors were rectangular with an average height of 150 cm.

### *PERIOD II (2800-2500 B.C.)*

It corresponds roughly to Protodynastic II and III A of Mesopotamia. It also corresponds to Namazga III (late levels) and Kot Diji-Sothi complex of Early Indus (or Pre-Harappan) times as is evident from pottery also (Fig. 2.41). It is marked by "the abundance of raw materials imported from regions lying outside the local exchange circuit (lapis lazuli, turquoise, seal-

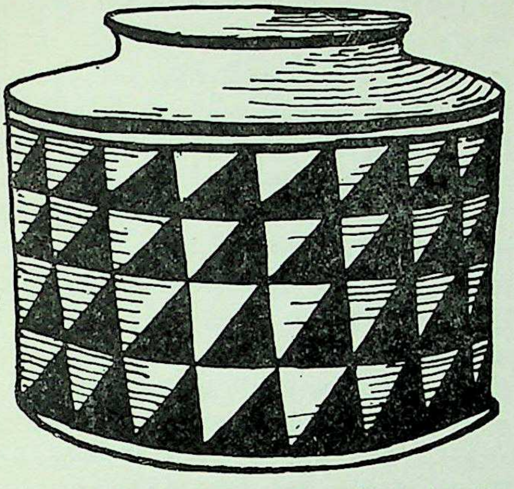


**Fig. 2.39a. A Nal type pot from Shahr-i Sokhta**

shells). The countless wasters found during excavation are evidence that these materials were worked on the spot . . . a workshop (of lapis lazuli beads, seals, etc.) in the true sense was identified on the western outskirts of the settlement." However, in the subsequent periods, lapis and turquoise 'became scarcer and scarcer'. In the houses of the last level of this period (5), the evidence of minor aspects of this craftsmanship is available as is clear from 'the flakes left over from manufacturing of carnelian, chlorite and alabaster, together with fragment of chlorite stamp-seals and shells, broken during processing.' In one of the houses bifacial flint arrowheads were manufactured.

It may be noted that a large portion of the Eastern Residential Area was destroyed by fire, marking the end of Level 7.

The houses were construcetd as in period I, although they were now bigger in size. In Eastern Residential Area they are square in plan and are grouped by fours to form blocks which are bounded by a network of winding streets with an average width of 2 m. The housing units measure from 90 to 150 sq m. Each unit consists of a single storeyed building, divided into a variable number of square rooms (from 6 to 10) and built entirely with moulded mud-bricks of 40×23×10 cm size. It had a decent courtyard also. From some of them terracotta pipes, telescoped in one another, removed the sullage water.

Barley and wheat were the main grains grown for staple food.

### *PERIOD III (2400-2100 B.C.)*

During this period, the Eastern Residential Area which was the centre of activities in Pds. I & II was gradually abandoned. The main habitation was now shifted to the west. An important large (600 sq. m) structure, burnt down around 1800 B.C. (period IV), and, therefore, called 'Burnt Building', was now (level 4) laid in an abandoned zone on the southern boundary of the Eastern Residential Area.

### *PERIOD IV (2000-1800 B.C.)*

It marks the sudden decline of the site. The residential area now decreased in size from 80 hectres to 5 hectres and got concentrated in south-east and north-west edges of the central plateau —all the other areas were abandoned. The co-called 'Burnt Building' which appears to be a 'multi-family housing block' 'is almost all we know of the last period of Shahr-i Sokhta.' From the levels of the final destruction a burnt skeleton of a 12 yr. old boy was found which made the excavator conclude that the burning of the building was an act of armed raid and vandalism, although, according to us, it

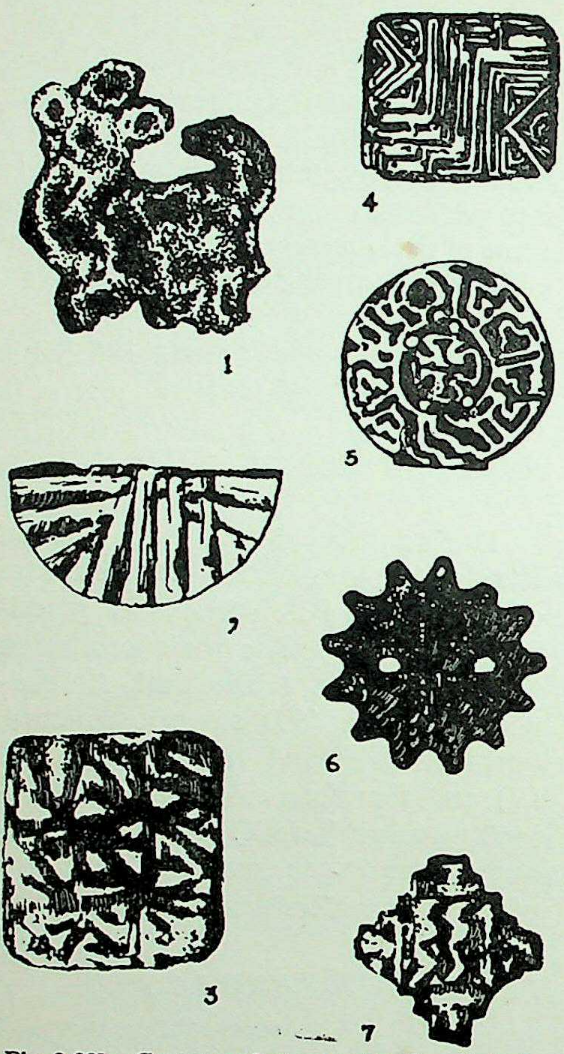


**Fig. 2.39b. Copper and stone seals of south turkmenian types from Shahr-i Sokhta**

could be accidental also. It may be mentioned in this connection that on the top of the collapsed rubble a pottery kiln was constructed not too long afterwards.

At this stage it is pertinent to quote Tosi (in Tucci 1978, 111) for this his views on the decline of the town during Period IV. "The decrease of Shahr-i Sokhta was not connected with depopulation phenomena and social decline. Pottery, metal-working and building methods improved their standard of quality with criteria of greater functionality, as can be seen in all craftsmen's products. The villages and minor settlements reflect on the whole the same distribution as in Pd. III in the Rud-i Biyaban delta without a variation in number."

"Similar phenomena were present in the whole of eastern Iran and Central Asia : the disappearance of the large settlements. The regions where protourban type settlements had grown up during the 3rd millennium B.C. on the edge of the desert depression of Kavir-Lut and beyond the Elburz Kopet Dagh ranges, underwent a similar decrease in size." We may add that the same feature marks the so called Late Harappan Stage of almost the same time bracket. However, in the case of India, particularly in Gujarat, then a number of settlements increased mainfold (Possehl, n.d.).

"The causes of this crisis in eastern Iranian urbanization are still not clear to us. However, it seems that *we may exclude the old hypothesis of a more or less mythical invasion from the North by peoples which have been identified for convenience sake as Indo-Aryans.* The same may be said for the various theories about gradual desertization and climatic changes, which have been popular from the beginning of the century until recent times. The information which we have available would rather seem to emphasize the continuance of conditions favourable to the human, animal and vegetable population."

"For this reason, and in the light of latest studies, it is apparent that the available evidence cannot be interpreted in sense of depopulation or a regression in the economic system but rather *as a crisis in the model of* *urbon heirarchy which concentrated in a single settlement, the city, the administration of all the primary and the more important secondary industry. It is more reasonable to suppose thal we have before us a new type or settlement structure, probably of that nature of a state which is no longer identified with the city but the oasis,* seen as a densly populated zone of small villages, irrigated by efficient canal system, and very much open to exchange with the nomad herdsmen who, from the 2nd millennium onwards, represented the predominent form of economy in the northern steppes of Central Asia." (Ital. ours)

The hypothesis put forward here brings into focus the conceptual dichotomy associated with 'City' and 'State'. It is somewhat strange since one cannot be the negation of the other. If by 'City' we mean only the concentration of men and money in a limited space and by 'State' we mean the lack of cities as economic entities and diffusion of population over a large area in what we call 'villages' or 'towns' then it is an altogether a different story. It is more subjective than real since historical situations may not always support this conceptual phenomenon. To us, a city cannot endure itself without state—the former is an economic entitity while the latter political. Political entity is basically abstract but gets manifested through political institutions, such as the kingship or oligarchy or city-state, nominal administrative machinery or even municipality. Their presence or absence cannot conclusively be proved without reference to written records but the presence or absence of city can be proved archaeologically. On the face of it the birth and growth of a city depends primarily on the well-oiled administrative machinery which is usually called Government. The government is expected to look after all the interests of the city dwellers, particularly in matters concerning demand and supply. Since no city can hopefully be self-sufficient and it has to depend on a number of towns, villages and forest lands the Government increases its hold over a large area around the city. It is usually called a state which is in reality the extended form of the city.

However, although a city evolves its own state, a state may be formed without a city. There are many forms of political authority which may directly or indirectly govern the affairs of settlements in a given area.

Obviously, the hypothesis which brings in the concept of dichotomy a number of dichotomy in the two realities—city and state—appears to be lop-sided. Sokhta's decline as a city cannot casually be related with the growth of Siestan State. Both may have existed simultaneously and the latter could survive the former.

To us, the case of Turkmenia and Bactria of the 2nd millennium cannot be quoted in the context of Sokhta Period IV since the Late Bronze Age settlements in those regions saw the emergence of fortified citadels which attest the birth of kingly states which, in turn, became the dominant historical reality in the succeeding millennium.

To us, city is basically an economic entity and when it is seen declining we must look for either political causes or economic break-down of the sustaining system due both to internal and external causes which are not always easy to locate. So far we have also not been able to work out definitely the causes of the downfall of the Harappan Civilization and sudden decline in the area of actual occupation during the post-mature phase of this civilization. However, we fully agree with Tosi that neither the mythical Aryan invasion nor the desiccation of land or even oft repeated floods, is capable of explaining a seemingly very complex socio-economic situation.

Lastly, was Sokhta a city or just a proto-urban settlement? Where are the monumental structures? What form of Government is visualized? Where was the cause for tension?... Khlopin (1972) also spoke in the same language about Altin-Depe and Namazga-Depe. He had at least some justification because of the monumental structures which could be interpreted in many ways as causes for social tension but Tosi has little justification unless he imposes something purely on theoretical grounds.

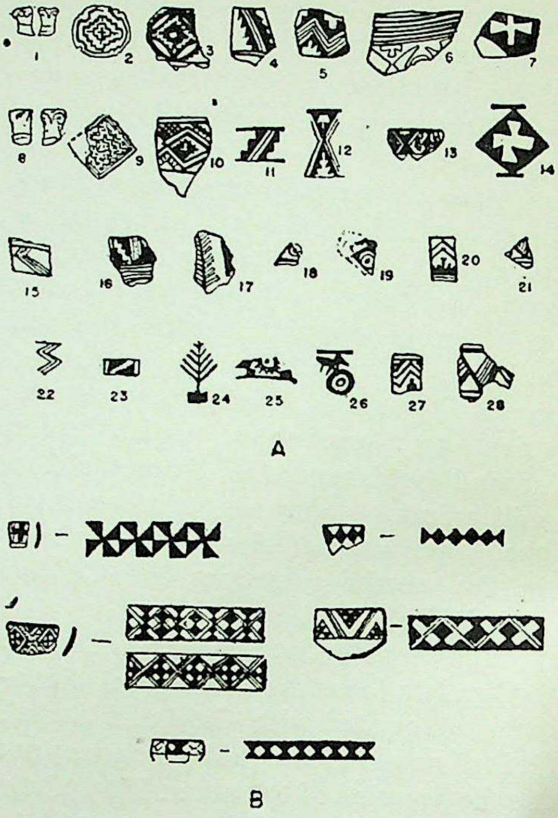


**Fig. 2.40. Comparisons : 'A'** *After Masson;* **'B'** *After Tosi*
**A=Figurines, seals and painted designs on pottery. Damb Sodaat II (1-7 and 15-21) and Namazga III (rest)**
**B=Painted designs on pottery. Lefts : Namazga III; Rights: Sokhta**

## SOUTH TURKMENIA AND THE INDIAN BORDERLANDS : CULTURE-CONTACT SITUATIONS

The Namazga III pottery (Fig.2.4) from the Geoksyurian sites has undoubtedly numerous parallels in the Quetta Ware (Fig. 2.41a) found at the Quetta Valley sites (type site : Damb Sadaat) and also at the sites on the confluence of the rivers. Helmand and Arghandab (type site: Mundigak, Fig. 2.38) and in Siestan (type site : Shahr-i Sokhta). The painted designs which show affinities between the Geoksyurian and Quetta wares are stepped lozenges, chequered panels, crosses of various types, 'T' shaped motif, sun symbol, plant motif, etc. (Fig. 2.40 A) It has, therefore, been surmised by Masson and Sarianidi (1972 : 94-96) that the originators of the Quetta Ware were not the local people of the Quetta Valley but the south Turkmenian people. The position has been accepted by Tosi (1969 : 283-86) and Biscione (1973: 105-111) and a few others Jarrige (1973) on a close analysis of the Quetta Ware (Fig. 2.30, 40a and 41). Tedjen is an extension of the Harirud which originates in northern Afghanistan. Thus, the Herat region could be reached if a determined group people, of course, some pressed by the displacement of their habitat's source of water, the delta of the Tedjen, and

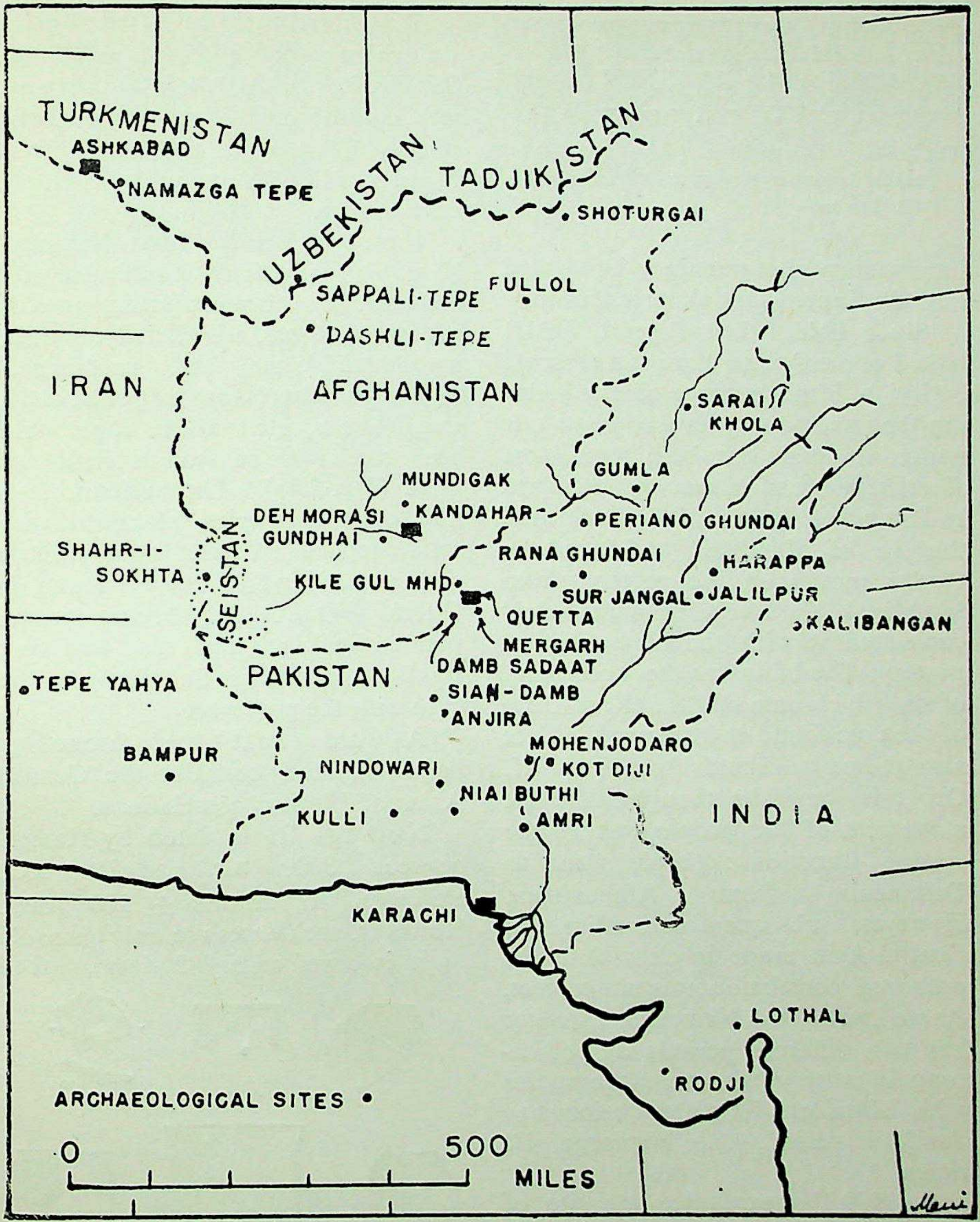

TURKMENISTAN
ASHKABAD
NAMAZGA TEPE
UZBEKISTAN
TADJIKISTAN
SHOTURGAI
SAPPALI-TEPE
FULLOL
DASHLI-TEPE
IRAN
AFGHANISTAN
SARAI KHOLA
MUNDIGAK
GUMLA
DEH MORASI GUNDHAI
KANDAHAR
PERIANO GHUNDAI
SHAHR-I-SOKHTA
SEISTAN
RANA GHUNDAI
HARAPPA
KILE GUL MHD
SUR JANGAL
JALILPUR
KALIBANGAN
QUETTA
MERGARH
DAMB SADAAT
TEPE YAHYA
PAKISTAN
SIAH-DAMB
ANJIRA
MOHENJODARO
BAMPUR
NINDOWARI
KOT DIJI
NIAI BUTHI
KULLI
AMRI
INDIA
KARACHI
LOTHAL
RODJI
ARCHAEOLOGICAL SITES •
0
500
MILES
Mani

Fig. M. 2.4. Map showing important sites in the Indian borderlands

pressed by their own 'way of life', the nomadism or seasonal migrations, crossed the Kopet Dag-Khorasan ranges with pots and pans loaded on the cattle and ponies. The feasibility part of the theory is, therefore, secured, only detailed chronological bracketing and the discovery of some

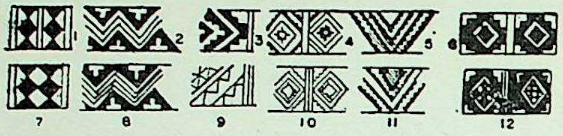


**Fig. 2.40a.** Comparison: (*After Sarianidi*). Painted designs on pottery: 2-6 Namazga III; 7-12 Mundigak III

intermediary sites remain to be worked out. But indeed that alone is crucial.

Since 1946, when Piggott (1947) talked of the Quetta Ware as a separate entity, a large number of sites yielding the same pottery have come to our notice. Its origin has been a problem of serious discussion amongst scholars. In fact, when Casal (1961) excavated the site of Mundigak and found the Quetta motifs on the pottery from Mundigak III levels, he immediately correlated it with the Namazga IIA pottery. The basis was the occurrence of six polychrome sherds at Kara-Depe of the type found at Mundigak III. He also quoted two sherds from Anau II. On this basis he thought that the movement of the people was in the reverse direction : people went to Turkmenia from Afghanistan. However, subsequent excavations in Central Asia made it clear that the proposed correlation was not correct. As we know, the Namazga sequence has two different periods of polychromy in pottery, the one that compares with Mundigak III pottery belongs to the later period, *i.e.*, Namazga III times.

In 1969 Tosi excavated the site of Shahr-i Sokhta in Siestan. As was expected from the results of the explorations, the Quetta Ware was found in the lowest levels, Level I, dated previously to 2900-2700 B.C. but now revised (Tosi in Tucci 1978) to 3200-2900 B.C. bracket.

It is, however, to be noted that in Baluchistan, at the site of Damb Sadaat (Fairservis 1971, 134) this ware was conspicuously absent in the Level which has been correlated with Namazga IV, belonging to the Early Bronze Age.

It may be recalled that Namazga III pottery is basically a buff ware with elaborate chocolate coolured geometric patterns (crosses, crenellated obliques, pyramidal forms) and zoomorphic representations (snow leopards, cows, stags, ducks, etc.) whose roots have been traced by Masson in Hissar and Sialk (Fig. 2.4a). The animals, in a number of examples, 'alternated with solid stepped triangles or concentric circles, motifs which can be found in Quetta Ware'. Polychrome ware, painted in black and red, was very small in quantity. So also was the case with the grey ware.

A word about the chronology before we finally consider the Central Asian and Indian correlations.

Namazga III is dated by Masson between 3000 B.C. and 2500 B.C., although it admits ± 200 years. However, such dates are only broadly as it is based on a $^{14}$C date worked

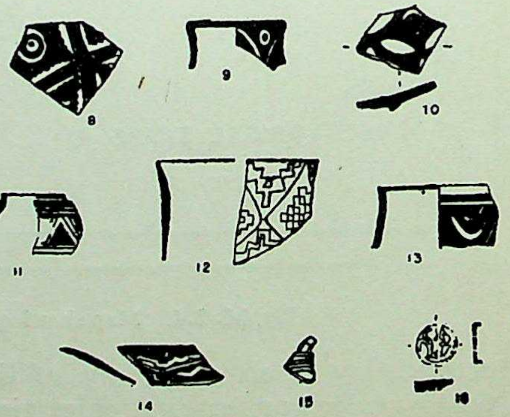


**Fig. 2.41.** Surface pottery from Mehrgarh: 8-12 and 14 Turkmenian affinities; 11. Periano-Ghundai type; 16 pottery seal. *After Jarrige*

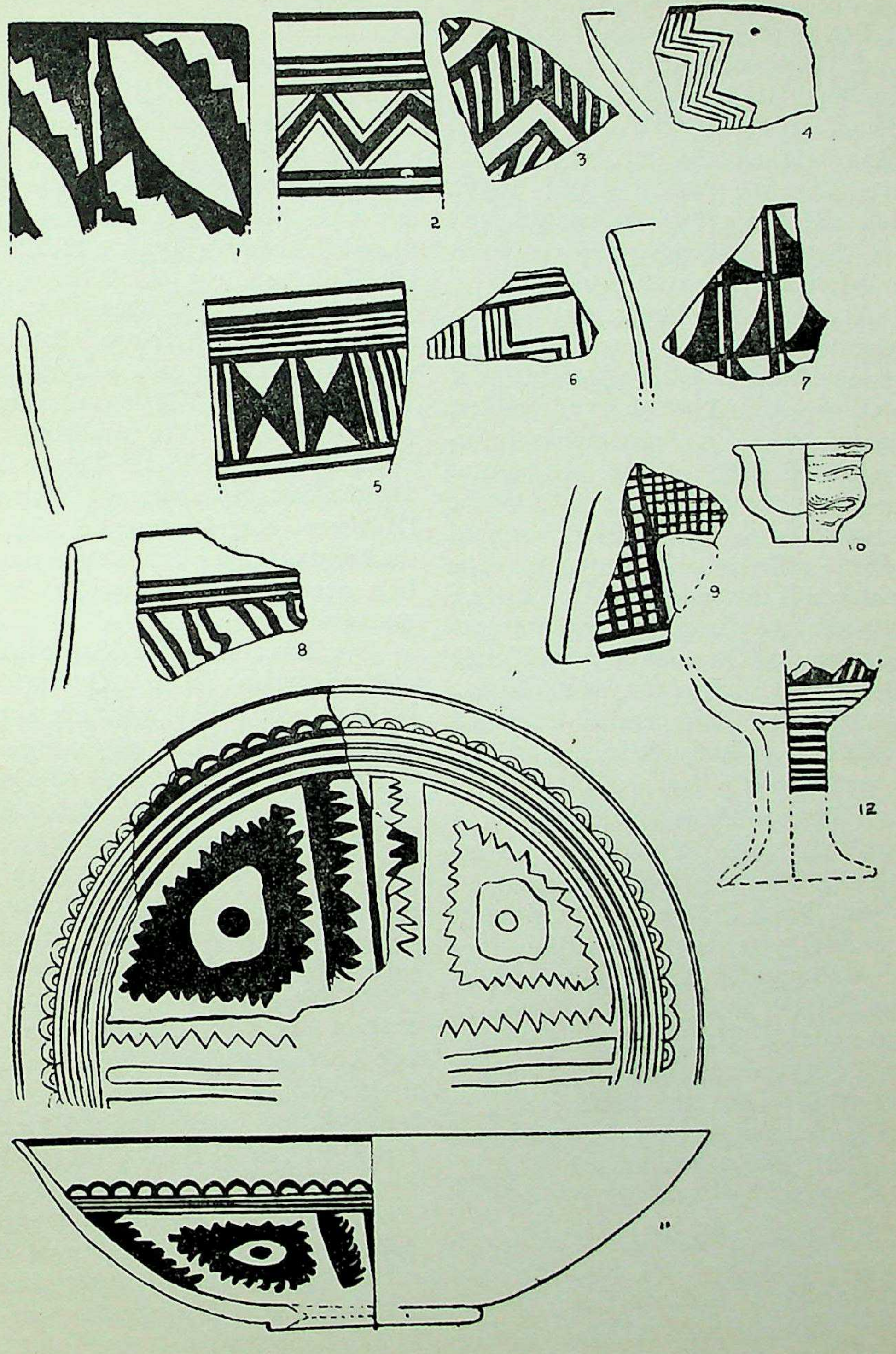

2
3
4
5
6
7
8
9
10
12

Fig. 2.41a. The Quetta Ware shapes and painted designs

out on a sample from Kara-Depe top level Ia (2750 ± 220 B.C.). A $^{14}C$ date from Geoksyur is 2760 ± 100 B.C. Mundigak III is dated around 2235 ± 150 B.C. Damb Sadaat II is dated to 2425 ± 421 B.C. By and large, therefore, all these sites belonged to the first half of the third millennium B.C. and, therefore, the possibility of their inter-relationship is rated high.

At Shahr-i Sokhta, according to Tosi, out of the 80 painted motifs 40 belong to the Quetta-Namazga III Ware group. Although the complete identity of designs and motifs is restricted to 6.5% of the total, yet, at least 20% of more than 1/4th of the pottery may have been inspired by the Turkmenian examples. The evidence is extremely significant since from the same level we have anthropomorphic clay figurines also which are of south Turkmenian type : head like a bird's beak and legs together in a single conical body bending forward, thus known as a '*foot profile*'.

In this context it may also be noted that the same level has yielded Mundigak I-II, Kile Gul Mohammad IV and Damb Sadaat II wares since it goes a long way to the existing stage of culture-interactions. Still more significant is possibly the discovery of a number of impressions of cylinder seals carved with Jemdet Nasr geometric motifs from the same level. It is really the only direct link we have between Mesopotamia and southern Turkmenia (Tosi 73-74, 52).

However, this richness of comparative material is not there at Mundigak as Biscione (1973, 105-18) has rightly pointed out. The quantity of the Quetta Ware in Period III of Mundigak is very little although it has repeatedly been visualized that the Turkmenian movement to Siestan could not have passed through any other station except Mundigak. Biscione has, therefore, suggested another route for Turkmenian –Helmand delta relationship—via Khorasan, 'probably, after a first wave had come from Mundigak' (Biscione 1973, 105-18). Unfortunately, the Khorasan region of Iran has not been adequately explored and, therefore, Biscione's suggestion remains only a hypothesis.

Tosi (1968, 283-86) has also brought to our notice the similarity that exists between the Kechi Beg pottery and the Geoksyur pottery of Namazga III times, but, it may be admitted, the sherds which establish the correlation account for hardly 15% of the total collection.

The Damb Sadaat evidence speaks of late intrusion of the Quetta Ware in the Quetta Valley, which is surprising. The possibility of getting a site of Damb Sadaat I period with Quetta Ware, therefore, cannot be ruled out.

The picture, on the whole, is, therefore, not very clear. Similarity in pottery between Turkmenia and north-western Indian sub-continent is more than clear but we are not at all sure about the route through which the contact was maintained. The Mundigak Route and Khorasan Route have their own claims but each one of them has still to yield more evidence to establish such claims. Tosi (1973-74) has all along been conscious of it but could not help hypothesizing on the diffussionary model because of overwhelming similarity in pottery designs between south Turkmenia and the Indian borderlands.

So much about the pottery from south Turkmenia, south Afghanistan and Iranian Siestan and their possible interrelationship. We have purposely used the epithet 'possible' because except for a few painted designs and motifs, which fall into the category of identical patterns, the oft-quoted examples from sites like Mundigak are in fact the modified forms of the Namazga III painted designs. Nevertheless, their generic relationship is more than clear. We must, therefore, consider other items of culture which may give support to our hypothesis of Central Asian contacts with Indian borderlands.

From Kara-Depe we have a number of terracotta seal-amulets or stamps, the like of which Afghanistan has also produced. Thus, at Said-Kala-Tepe (Fairservis 1971, 122) a beautifully carved stone-seal, shaped like a solid square or cross with stepped sides (Fig. 2.42) has been reported from the upper level whose date is not very certain. At Mundigak, from Period III levels, Casal also reported, besides metal seals, a rectangular clay seal depicting a cross. Besides the seals, the terracotta figurines have also some significant similarity in bird-beak faces although Mundigak has not yielded as many good examples of this type as would have been necessary to reach at a sound conclusion. The same observation applies to metal objects since the typical shaft-holed axe (Casal 1961) of Mundigak III type has not been found in Namazga III collections.

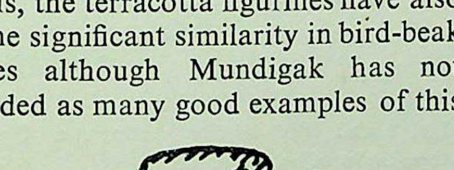


Fig. 2.42. Stone stamp-seal from Said Kala Tepe, southern Afghanistan

There is, however, another aspect of life where similarity means a lot as far the hypothesis of the movement of people is concerned. It is the mode of the disposal of the dead and the form of the burial-chamber since they are concerned with the super-natural and persist longer than the items of the material culture. Thus, at Mundigak III, there is the clear evidenee of collective burials in rectangular chambers made of mud-bricks (Casal 1961) a practice whose roots go as far northwest as south Turkmenia of Namazga III times. To be exact, its antiquity in south Turkmenia goes further back in time, in Namazga II levels, dated to the turn of the 4th-3rd millennia B.C.

The overall picture of the situation, therefore, admits only 'trait infiltration' : from south Turkmenia to south Afghanistan, and, from there, possibly to Siestan where, at Shahr-i Sokhta, the excavators have discovered a large number of potsherds, some with typical Namazga III motifs and some with modified Namazga III motifs. In this process, which must have implied the movement of some people at least, the Quetta Valley in Baluchistan may have been touched.

It should, however, not be presumed that the Central Asian elements did not influence the contemporary cultures lying to the east of Baluchistan. In a number of examples the decorative motifs of Turkmano-Quetta origin

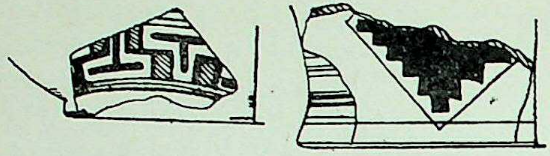


**Fig. 2.43.** Namazga motifs in Indus plains, from Gumla II

have been found depicted on the pottery discovered at Gumla (Dani 1970-71) in Period III (pre-Kot Diji) levels. Figure no. 41 of the excavations report published by A. H. Dani shows a part of a big solid square or cross with stepped sides. Fig. 17 of the same report shows the presence of a number of Namazga III modified-patterns, *e.g.*, rectangles, T shaped motifs, triangular petals (ill. nos. 96 through 102). Fig. 18, nos. 136 through 139 also depict bisected squres with stepped edges, also called, stepped pyramids (Fig. 2.43). Gumla has also yielded the foot profile type figurines popular in south Turkmania (Fig. 2.43a).

Recent explorations conducted by by Enault and Jarrige (1973) in the Bolan area, where the Bolan Pass debouches into the Kacchi lowland have brought to light the existence of Namazga III motifs (Fig. 2.41), as modified in the Quetta complex. Plate 13.2 of *South Asian Archaeology* (1973) has several illustrations (nos. 8, 11, 12, 14) of pot-sherds found at Mehrgarh which depict several variations of stepped pyramids. In Plate 13.8 this motif has been shown alternating with a chain of solid opposed-triangles, in at least three examples. Kirta and Gurdi also contain the same Namazga-Quetta motifs, including plant motif (Plate 13.13 and 13.14). From Mehrgarh (Jarrige 1976) near Bolan mouth several terracotta figurines, a male head and a seal both have been found (Fig. 2.44).

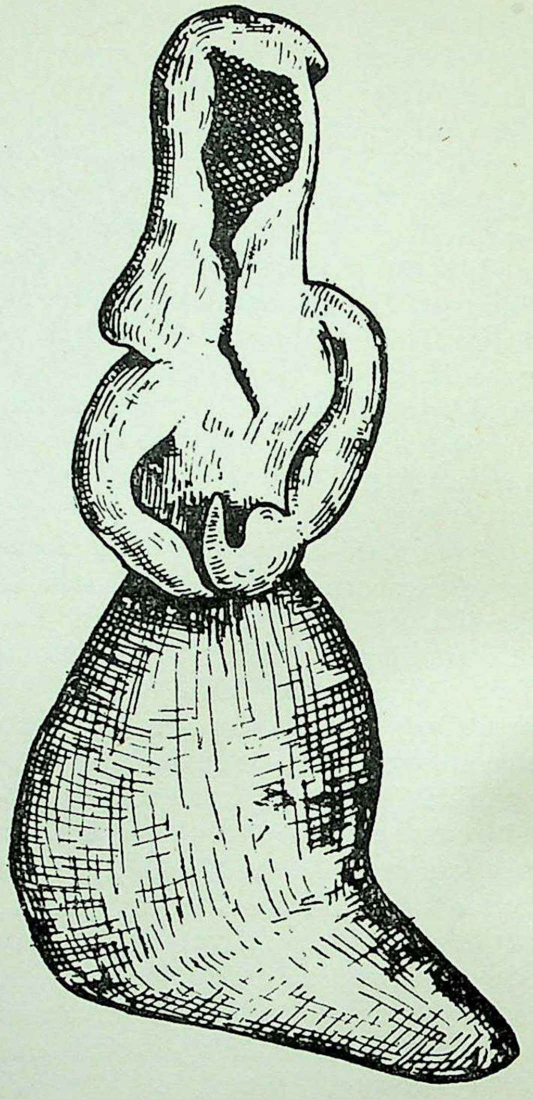


**Fig. 2.43a.** Foot-profile terracotta female figurine from Gumla

This influence, it is significant to note, penetrated farther east. At Sarai Khola, near Taxila, the Kot Diji levels have yielded comparable material. Fig. 22, Sub-type IX E of *Pakistan Archaeology*, Vol. 8 (1972) belongs to the same Namazga-Quetta group (Fig. 2.45). The T shaped motif must also

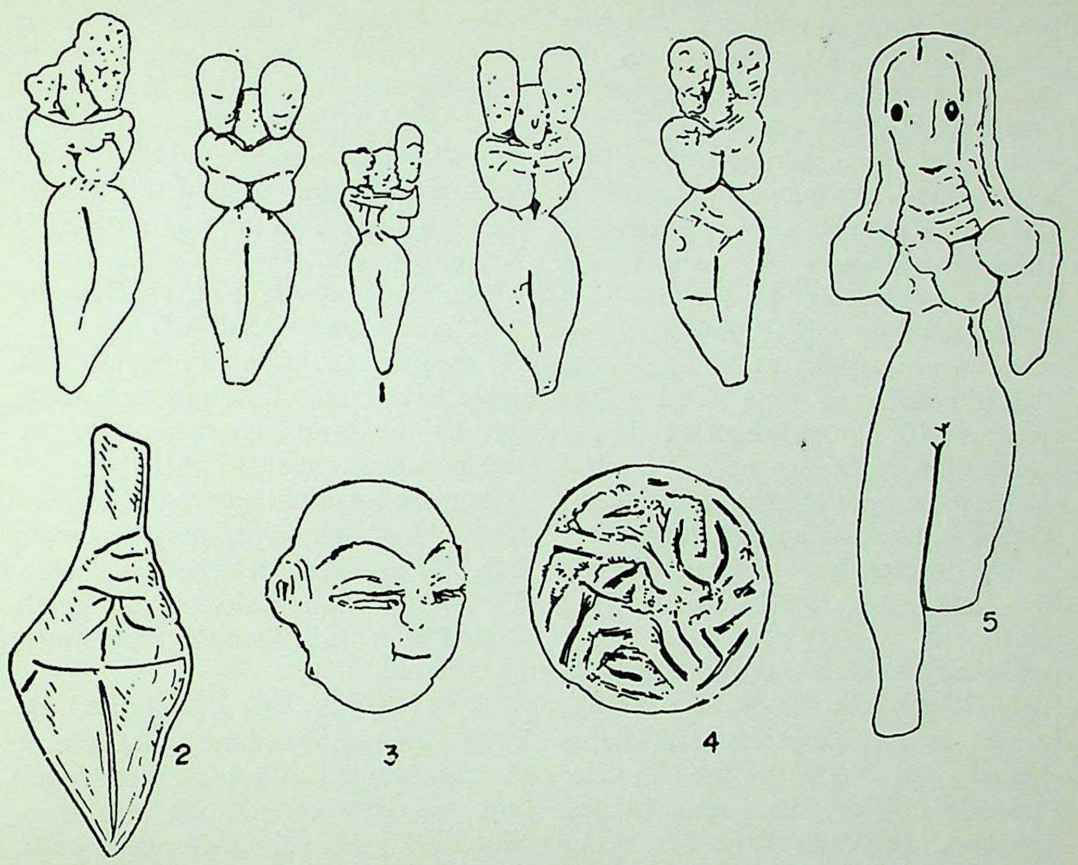


**Fig. 2.44. Terracotta figurines : terracotta figurine and a seal from Mehrgarh; 1-2 Namazga type ; 5 Zhob type; 3 somewhat Mundigak type, 4 seal, general type**

have come to this place through Gumla.

The motif of 'vertical chain of logenzes' goes as far east as Jalilpur, on the Ravi (Mughal` and Halim, 1972).

Without going into the mechanism of transmission of the decorative motifs, we may consider another question. In what lies the origin of the Namazga III black-on-buff ware itself? Masson and Sarianidi are of the opinion that it lies in the pottery tradition of south Iran. They have dealtwith this problem in details. They write, "The origin of the Geoksyur pottery style is very obscure. Although a few of the decorative motifs have their proto-types in the ceramic painting of the preceding Namazga II period, on the whole this similarity is no more than superficial. No equivalent have been found in Mesopotamia, but the Buff Ware of south-western Iran closely resembles the Geoksyur polychrome pottery." (Masson and Sarianidi 1972). They then quote the pottery from Tal-i-Bakun. They have

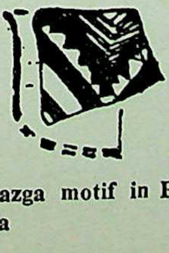


**Fig. 2.45. Namazga motif in Potwar, at Sarai Khola**

been specific on two counts: the presence of the Maltese Crosses and the decoration of pottery bases by parallel lines that cross in the centre of the base as has been pointed out earlier. But the space gap between south Iran and south Turkmenia is so much that presently his views rest only at the level of hypothesis. In fact, as said earlier, Khlopin believes in the theory of indigenous origin of Namazga III painted motifs and to a large extent we agree with him although we do not rule out the possibility of trait infiltration in movement of ideas through the limited culture-contact situation.

The problem has also been reviewed by Lamberg-Karlovsky and Tosi jointly in a very exhaustive paper published in *East and West* Vol. 23 (1973, 21-55). The site of Tepe Yahya, located in south-eastern Iran is also characterised by black-on-buff ware. Period IV of Yahya has been divided into IVA, IVB and IVC, IVC being earlier than IVB, and so on.

IVC = 3400-3000 B.C.
IVB = 3000-2500 B.C.
IVA = C.2200 B.C.

Namazga III, on this count, was contemporary of Yahya IVB; partly overlapping with IVC, if suggestion of Tosi and mine (3200 B.C.) is accepted. As said above, the pottery from IVB was painted buff ware but it must be clearly stated that none of the paintings show any significant similarity with those in the Namazga III repertoire. The excavators have quoted several items common between Sokhta I and Mundigak III, and Mundigak III and Namazga III but none between Yahya IVB and C and Namazga III. In fact, they have in their Map clearly kept southern Iran out of the Cultural Interaction Zone No. 1 which covers only south Turkmenia, Siestan, southern Afghanistan and parts of Baluchistan. Tosi (1977) has given (Fig. M. 2.5) a map which, according to him, shows the area covered by different cultures (autonomous) and the manner they are likely to have interacted in the 3rd millennium.

We may, at the end, conclude by stating that the first half of the third millennium B.C. ushered in a new era in the movement of people and ideas in the north-western regions of the Indian subcontinent in which Central Asia played a prominent role, although its exact nature has yet to be worked out. Since large areas between south Turkmenia, Iranian Siestan and south Afghanistan still remains very much ill-explored.

Tosi (1973-74, 54) has quoted D. Potts who questioned the hypothesis of direct convergence implying thereby that 'not even the combinations of Sistan-Mundigak, Mundigak-Geoksjur and Geoksjur—Sistan may be considered valid.' According to Potts' survey there could be only an 'insertion of two sequences into a common sphere of interaction'. Although Tosi (*Ibid.*) tried to brush aside this objection still he could not get over his own confused state of thinking when he talks of both indigenous and diffusionary models being applicable to the situation. He writes, 'we have no intention of resuscitating the long dead diffusionist theory but simply suggest a coherent model of historically and geographically circumscribed transmigration that is further more substantiated by a considerable amount of data. Moreover, is it possible to deny that a shift to the south along the course of the Tedjen actually took place? Evidence in its favour is the

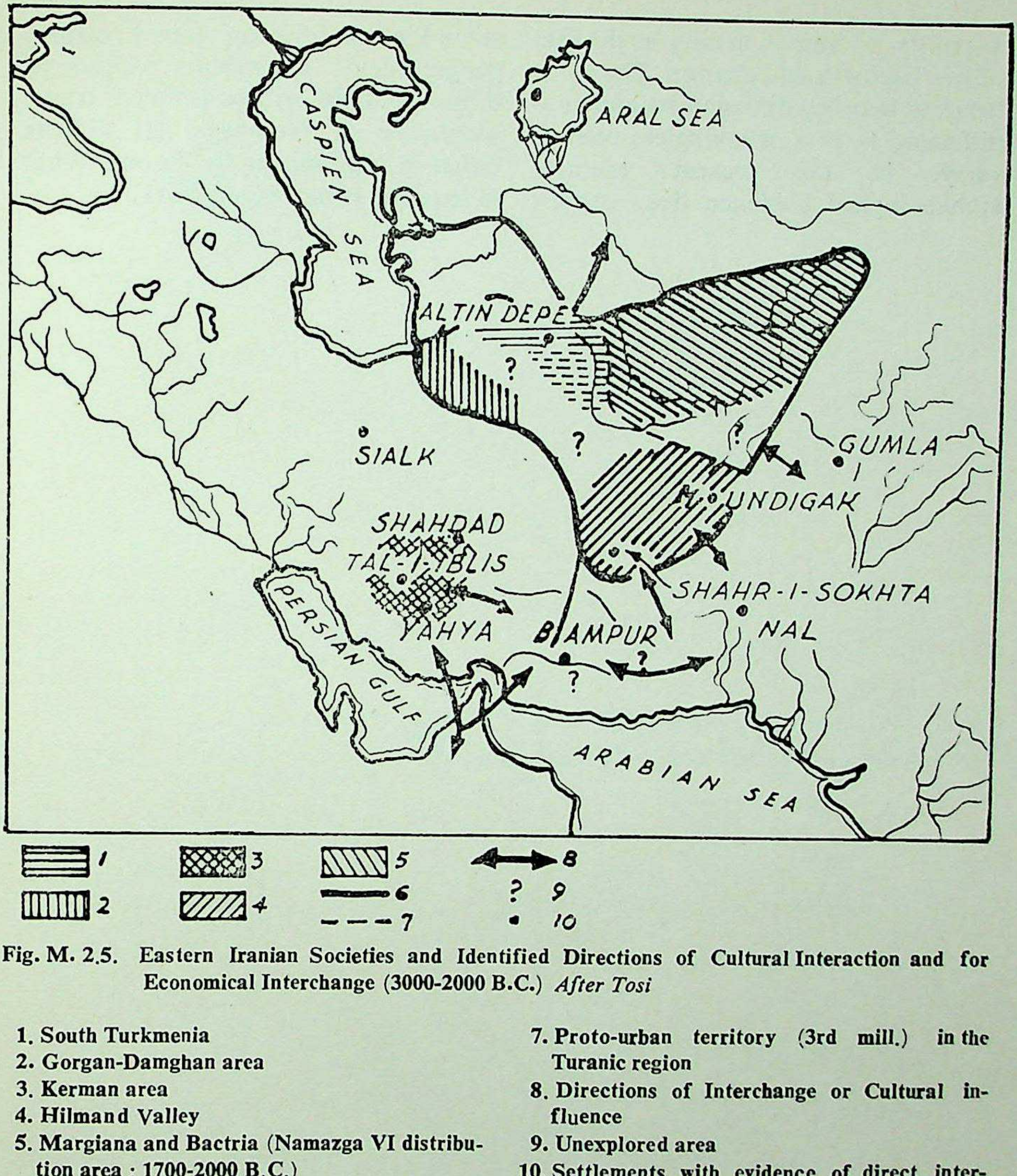
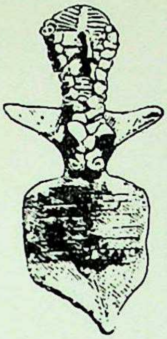

CASPIEN SEA
ARAL SEA
ALTIN DEPE
SIALK
GUMLA
MUNDIGAK
SHAHDAD
TAL-I-IBLIS
SHAHR-I-SOKHTA
YAHYA
BAMPUR
NAL
PERSIAN GULF
ARABIAN SEA
?
1
2
3
4
5
6
7
8
9
10

**Fig. M. 2.5. Eastern Iranian Societies and Identified Directions of Cultural Interaction and for Economical Interchange (3000-2000 B.C.)** *After Tosi*

1. South Turkmenia
2. Gorgan-Damghan area
3. Kerman area
4. Hilmand Valley
5. Margiana and Bactria (Namazga VI distribution area : 1700-2000 B.C.)
6. Outer limit of the Turanic region
7. Proto-urban territory (3rd mill.) in the Turanic region
8. Directions of Interchange or Cultural influence
9. Unexplored area
10. Settlements with evidence of direct interchange with the Turanic region in the formative period of Indus Civilization

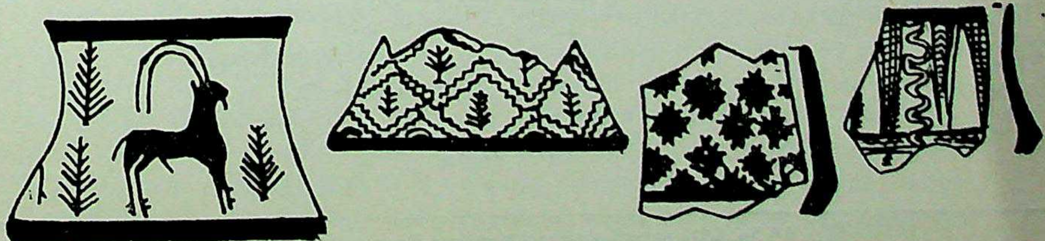
foundation of Khapuz-depe which Sarianidi and Khlopin attribute to the very inhabitants of the Tedzen. On the other hand the 600 kms separating Sistan from Serachs are still archaeologically unexplored.' (*Ibid.*). The fact of the matter is that the evidence of Khapuz-Depe cannot be extended to cover Siestan since Khapuz-Depe is within the Tedjen delta-shift region of south Turkmenia while Siestan is not. Let it be clearly understood that diffusion across the so-called homogenous geographical units have been as much a reality of human history as the fact of local growth and change. The controversy between diffusionists and non-diffusionists is a meaningless controversy. In the present example archaeological evidence does suggest some kind of diffusion across various geographical constraints although diffusion here will not mean transplantation of Namazga III culture either in Afghanistan or Siestan. What is required is more field work.



# THE BRONZE AGE

S.3.1 ↑

S.3.2 →



S.3.1=Female figurine from Namazga V
S.3.2=Painted pottery from Namazga IV

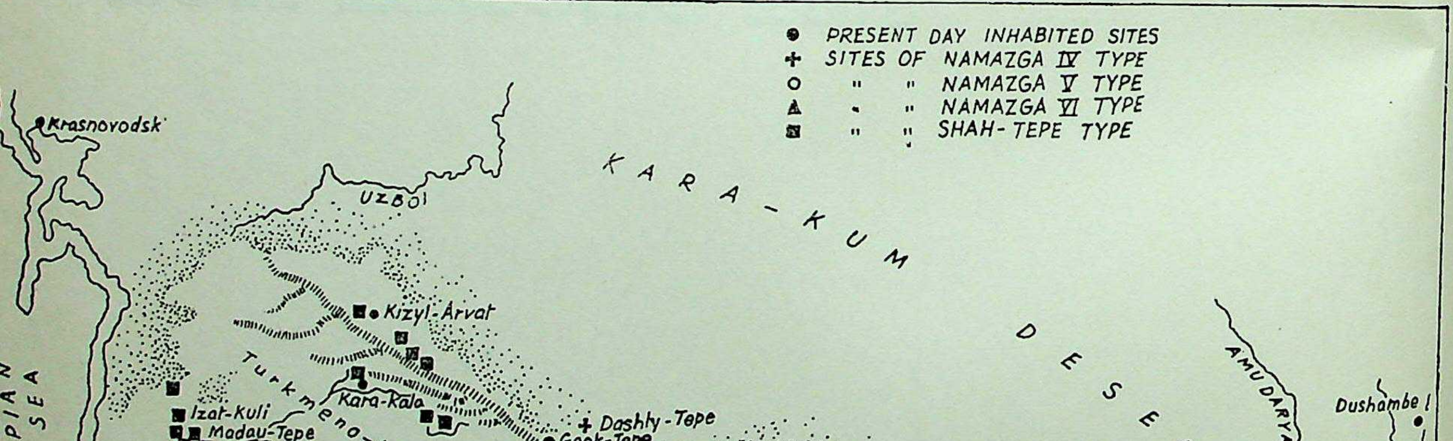

● PRESENT DAY INHABITED SITES
✚ SITES OF NAMAZGA IV TYPE
○ " " NAMAZGA V TYPE
▲ " " NAMAZGA VI TYPE
▨ " " SHAH-TEPE TYPE
Krasnovodsk
UZBOI
KARA-KUM DESERT
CASPIAN SEA
Kizyl-Arvat
Kara-Kala
Turkmeno-khorasanian Mountains
Izat-Kuli
Madau-Tepe
Kizyl Atrek
ATREK
GURGEN
Yarim-Tepe
Sah-Tepe
Tureng-Tepe
Elburz
Tepe-Hissar
Dashly-Tepe
Geok-Tepe
Ekin-Tepe
Yangi-Kala
Ashkhabad
Anau
Shor-Tepe
Kosh-Tepe
Elen-Tepe
Artyk
Gara-Tepe
Tacchangk-Tepe
Namazga-Tepe
Elken-Tepe
Tedjen
Tekkem-Tepe
Ulug-Tepe
Khapuz-Tepe
Altyn-Tepe
Kuchan
Meshhed
TEDJEN
Serahs
Mary
MURGAB
Auchin-Tepe
Tahirbai
AMU DARYA
Dushambe
Kuchuk-Tepe
Tulkhar

Fig. S.3.3a. Map showing some important Bronze Age sites in southern Central Asia

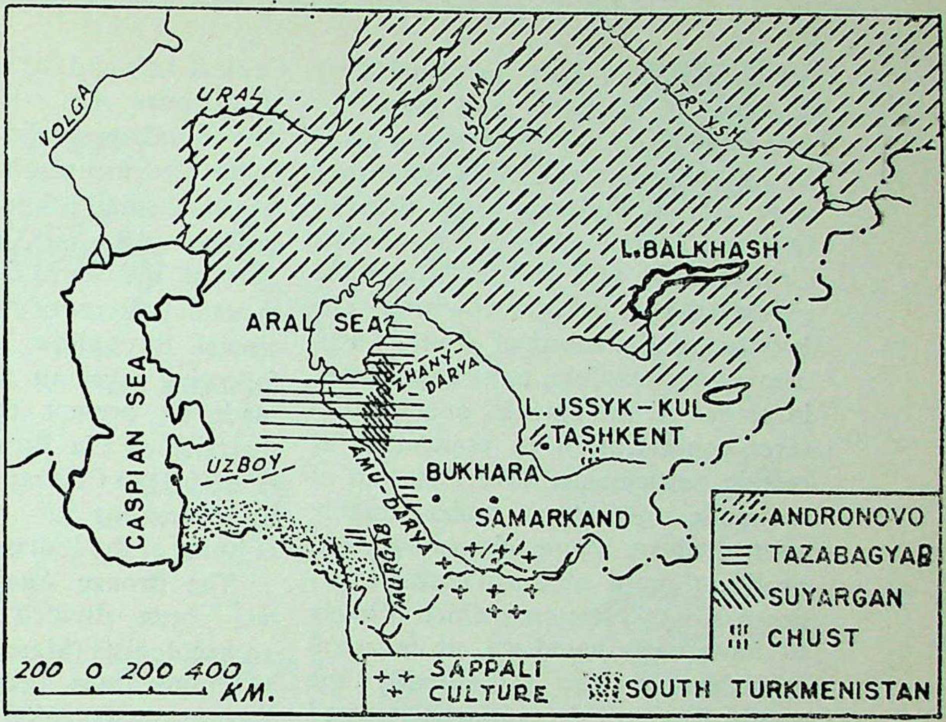

VOLGA
URAL
ISHIM
IRTYSH
L.BALKHASH
ARAL SEA
ZHANY-DARYA
CASPIAN SEA
L. JSSYK-KUL
TASHKENT
UZBOY
AMU-DARYA
BUKHARA
SAMARKAND
MURGAB
ANDRONOVO
TAZABAGYAB
SUYARGAN
CHUST
200 0 200 400 KM.
SAPPALI CULTURE
SOUTH TURKMENISTAN

**Fig. S.3.3. Map showing some Bronze Age cultures**

THE qualitative changes which were fast occurring in the cultural milieu of the Late Chalcolithic villages in Soviet Central Asia logically led to the Early Bronze Age towns with greater concentration of men, materials and animals than hitherto. It is significant to note that in this process of transformation the number of settlements dereased but the occupational area in the settlements increased considerably. With this apparently peculiar phenomenon lies what is called 'urbanism'. It is conceived as a cultural stage where material prosperity emerged out of a kind of corporate life which involved 'professionalism' and 'group behaviour' in trade and technology as well as administration and extra-mundane activities (Ucko and Tringham 1972). Although at one time, following Gordon Childe, writing was considered an essential qualification for a culture to be called urban, it is no longer considered a valid criterion for one very simple reason—writing cannot be the only means to keep records of men and matters ; in the absence of writing, the entire Vedic literature was preserved for centuries through oral traditions and the medium of memorization. Examples of various kinds of urban cultures without writing can be given from Meso-America and other regions.

As a matter of fact the underlying reasons for the birth and growth of writing in Egypt were never the same as in Mesopotamia; in China they were entirely different from those of India (Gupta 1975-1976). Soviet Central Asia also passed through the urban stage but without writing. The Bronze Age urbanism of south Turkmenia has, therefore, to be appreciated in terms of monumental public structures, concentration of population at certain settlements, diversification of economic activities under highly controlled conditions of corporate life, prolification of arts ard crafts, emergence of social structure which is likely to have been based on professional specialization, etc. Admittedly, the south Turkmenian cities witnessed somewhat stunted growth in comparison with the Indus and Mesopotamian cities, even then whatever heights they achieved was remarkable for one very hard fact—south Turkmenia has never been blessed with a stable perennial river having wide flood-plains containing rich soil. It must have been pretty hard for the people to collect enough cereals for the growing population of the cities. The optimum condition in which man-land-animal relationship remained in balance, was again and again disturbed mainly due to hydrological reasons. It happened in pre-Bronze Age and it also happened in the last stages of the Bronze Age. What really mattered was the genius of the people which again and again tried to overcome these constraints, though not always successfully.

The urban phase of the Bronze Age was, however, confined to south Turkmenia. In other parts of Soviet Central Asia and the Indian borderlands the Bronze Age witnessed only the rural and nomadic complexes with some settlements which could at best be called small towns. This differential growth of Bronze Age cultures in this part of the world is in tune with the general pattern of culture growth and change throughout the ages. In the following pages an attempt has been made to present the archaeological material of the Bronze Age cultures (Fig. 3.1) in Central Asia for a proper understanding of the Bronze Age cultures of the Indian borderlands.

The Bronze Age of Central Asia has been divided by the Soviet archaeologists (Masson and Sarianidi 1972) into three periods - The Early Bronze Age (2500 B.C.—2000 B.C.), the Middle Bronze Age (2000 B.C. —1600 B.C.) and the Late Bronze Age (1600 B.C.—1000 B.C.). The Early Bronze Age is also called 'Proto-Urban' since much of the settlement pattern and economy of this period still continued to be in the tradition of the Late Chalcolithic. The Middle Bronze Age is called 'Urban' because of wide-spread qualitative changes in every field of life : economic, cultural and social. The Late Bronze Age marks the last phase of the Bronze Age and the beginning of the Iron Age. The chronological brackets are, however, extremely controversial and need drastic revision. This has been indicated at proper places in this chapter.

## The Early Bronze Age

### Namazga IV, Lower Levels

The Early Bronze Age opens with the abandonment of all the Late

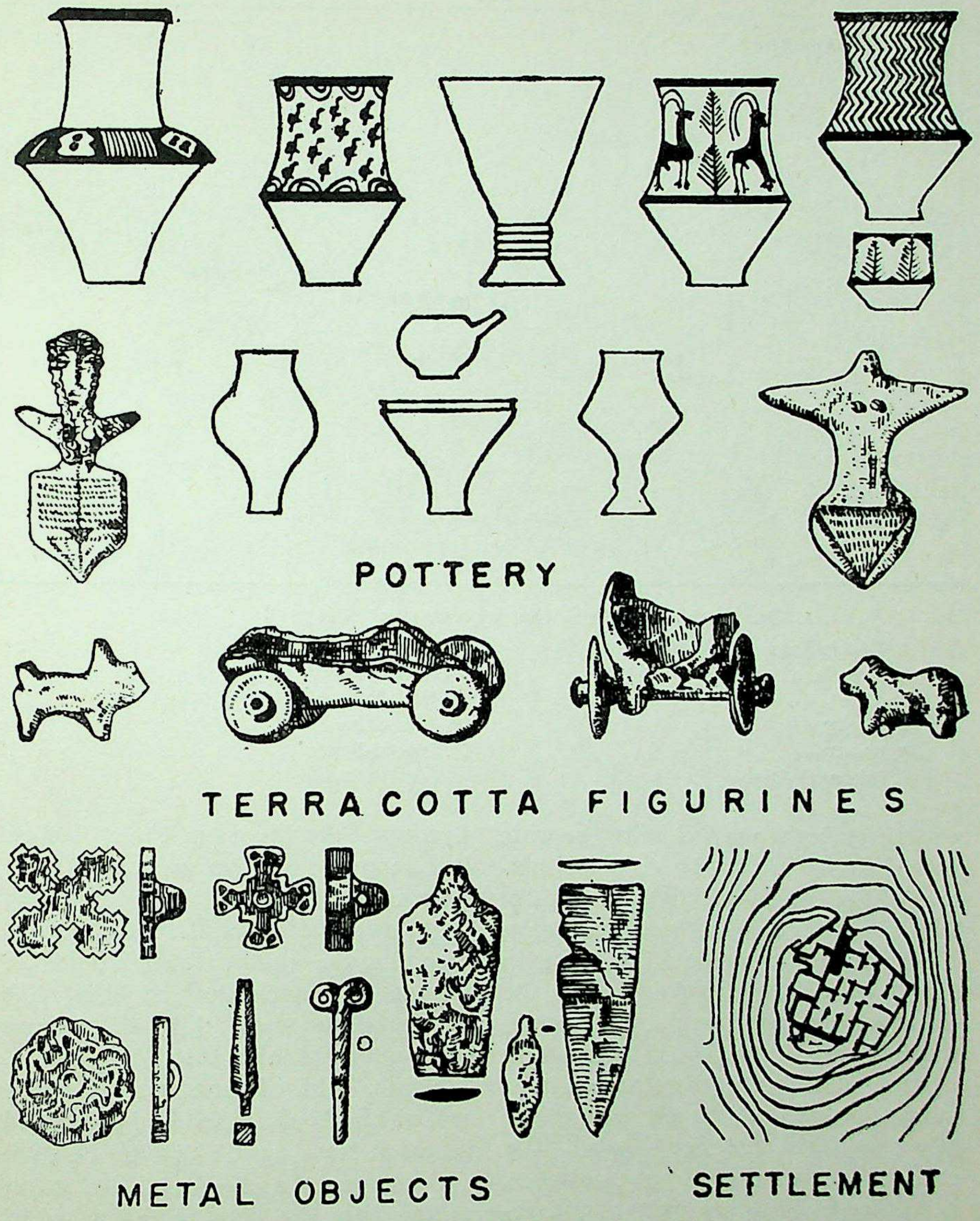

POTTERY
TERRACOTTA FIGURINES
METAL OBJECTS
SETTLEMENT

**Fig. 3.1. Namazga IV and V (Bronze Age) Culture-complex**

Chalcolithic sites in the Tedjen delta, shift to Akmazar and Chacha river basins (Altin-Depe, Ulug-Depe), and the colonization of some new areas in the Central zone, such as those in the vicinity of Artyk-Baba Durmaz (Taichanak-Depe, Shor-Depe, Kosh-Depe) (Fig. M.3.1). The former phenomenon

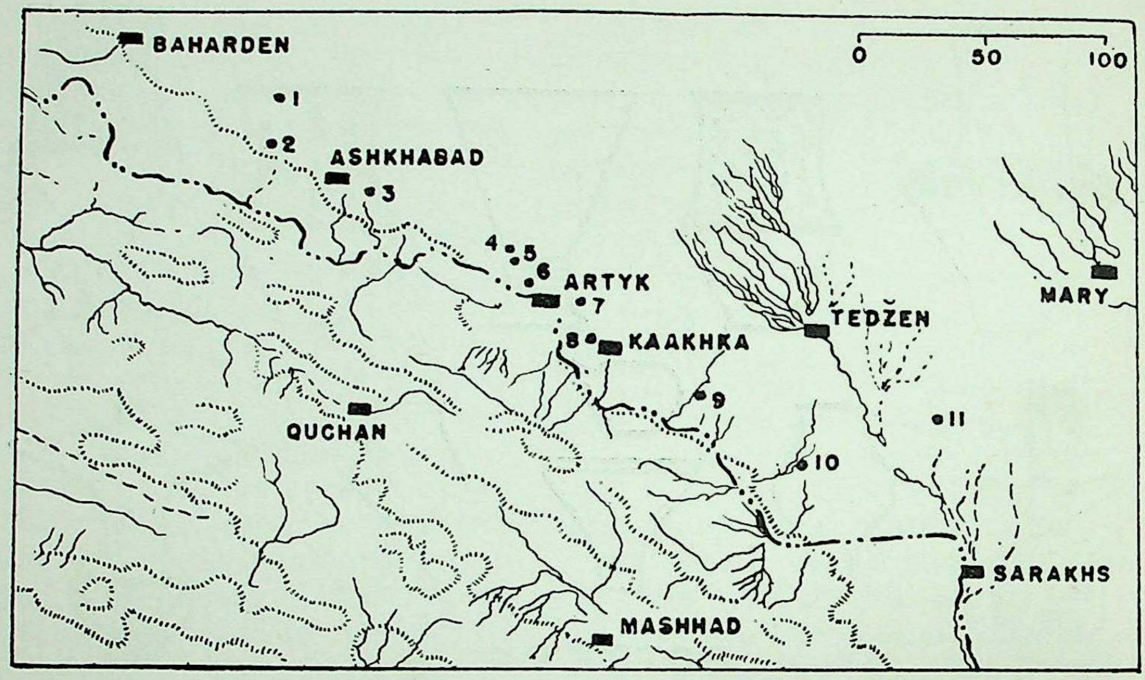


**Fig. M.3.1. Namazga IV (Early Bronze Age) Sites**

**1. Dashly-Depe**
**2. Ekin-Depe**
**3. Anau**
**4. Kosh-Depe**
**5. Elen-Depe**
**6. Taichanak-Depe**
**7. Gara-Depe**
**8. Namazga-Depe**
**9. Ulug-Depe**
**10. Altin-Depe**
**11. Khapuz-Depe**

was directly connected with the wide spread changes in the hydrological pattern of the Tedjen delta while the latter two may have been, partly, at least, the outcome of population shift to the banks of perennial rivers in the Eastern zone, and population-pressure in the Kopet-Dag region. The resultant pattern of culture, therefore, retains many features of the earlier period, albeit in the modified from. The cultural stage reached now, however, is marked by not only many improvements in the existing technologies but also in ushering in a number of new ones.

In the Namazga sequence, the Early Bronze Age falls in Period IV, which coincides with the early phase of Anau III. This is, of course, an over-simplification of the situation. First, because it is supposed to have covered a very long duration of time, represented by 4 to 9 m deposit at different sites, and secondly, the author's own studies of the actual material from sites like Khapuz-Depe and his long discussions with scholars like V.I. Sarianidi, I. Khlopin, V.M. Masson and Y. Shchetenko as far back as 1968 had convinced him that Namazga IV has to be divided into two phases—A and B or earlier and later, the 'later being marked by antiquities which have some significant affinities with the Indus material'. Recently, Tosi (1973-74, 61) has also come to similar conclusions on the basis of his observations on pottery from Altin-Depe, which he handled at Leningrad. 'The ceramic material from cuts

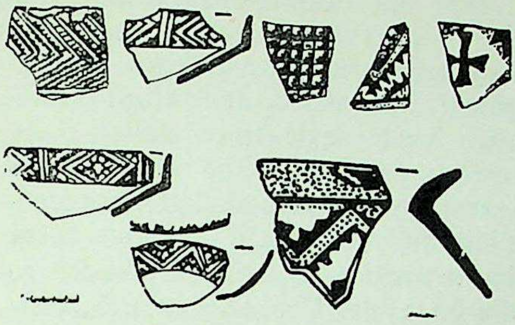


**Fig. 3.2. Altin-Depe : Painted pottery of Namazga III type from the lower levels of Namazga IV times**

4-5 contains a class of finds with painted black decoration on a thick dark red slip. The motifs closely follow the traditional triangular chequered patterns (Fig. 3.2). In Shahr-i Sokhta sequence, a very similar pottery specimen is found in the final painted pottery phases (Period III/phases 3-4) in very small quantities which are, however, large enough to allow this type of production to be placed in a position intermediate between that of Namazga V (Altyn 1-3) and the fragments of bowls characteristic of Namazga IV (Altyn 6-8). Thus the possibilty is raised that there might have been cultural phases, perhaps of short duration and of little significance in the overall development process but which are absent from the sequence so far elaborated.'

Namazga IV ushers in the potter's wheel, copper smelting furnaces, stone and terracotta seals, improved furnaces for pottery making, including toilet boxes and architectural pieces in typical Namazga III patterns (Fig. 3.3). Sophisticated drills, chisels and polishers for preparing stone ware are also found. The practice of erecting monumental structures also began during this period. The directional changes justify the use of the term 'proto-urban' since the qualitative changes in technology leading to economic upliftment of the people was certainly accompained with vast social changes in which professional classes of potters, smiths, stone cutters, architects, etc. automatically cropped up. We have now to deal with a complex socio-economic set up which was vastly different from the evolutionary process and not a violent change.

South Turkmenia of this (proto-urban) phase also shows social and cultural differences between the Western and Eastern sites, the sites of the Central zone show mixed characteristics. It may be recalled that the phenomenon of population shift that gripped the Eastern zone during this period did not occur in the Western zone and

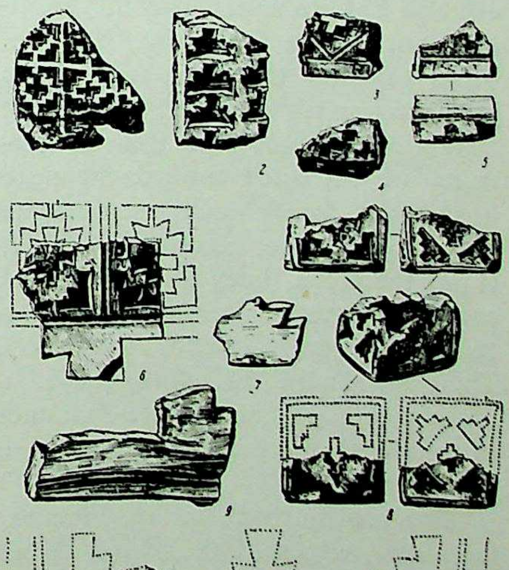


**Fig. 3.3. Clay objects, probably toilet boxes : Namazga V times**

the Central zone. The pattern of culture-growth and change, and the phenomenon of culture-interaction with northern Iran, which marked the earlier period, continued even during Namazga IV period as is clearly borne out from the evidence we have at sites like Ak-Depe, Taichanak-Depe and also Namazga-Depe. One thing more. The distribution maps of Namazga III and IV sites clearly show that the concentration was towards the Central zone, *i.e.*, area around Aryk, the Western and Eastern zones had comparatively very few sites. The reason for this appears to lie in the hydrological pattern of the area : the number of small rivers with good soil cover along the fans and sufficient water, at least during the spring months, for intensive and extensive agriculture was larger than those available in the Western and Eastern zones. This may, however, not explain the entire situation. Steps towards urbanism bring in the phenomenon which we call 'population attraction'—people from difficult terrains are attracted towards the more hospitable areas and settlements which offer better conditions of life. It is, therefore, both a geographical concept ('areas of attraction') and a cultural concept ('places of attraction'). The Central zone, therefore, played a unique role in the culture-dynamics of southern Turkmenia right from the Neolithic times.

The proto-urban culture-complex, therefore, witnessed the major types of settlements—small, covering about 2·5 acres of land, or even considerably less, such as Ak-Depe, Anau, Shor-Depe and Kosh-Depe and large, covering about 60 or more acres, such as Namazga-Depe, Ulug-Depe, Khapuz-Depe and Altin-Depe. It may be clearly marked that each of these four large sites occupied a distinct geographical area and river valley. Obviously, in a single river valley only one site could develop itself to the extent it was able to exploit its potentiality fully; others, if they were there in the same valley, were only feeders to the large site. Curiously enough, only Namazga-Depe had its several feeders, neither Ulug-Depe had any nor Altin-Depe, nor Khapuz-Depe, unless smaller sites in their vicinity are now covered under silt, which hardly appears to be the case since erosion is more than deposition in these rivers. And that is precisely the reason why Namazga-Depe alone could become the largest site (79 hectres) of Namazga IV-V times. The cultural factors underlying urban development led to a situation in Namazga V times in which except for a very few small sites in the western zone, secondary village-sites were almost non-existent. Cities grew at the cost of the villages. Population concentrated and human and natural resources were pooled in although natural constraints in this land-locked area were always the limiting factors in culture growth.

As was indicated earlier, the Tedjen delta was completely deserted at the end of the Geoksyur (Namazga III) period. The population then appears to have moved to two smaller settlements, at Khapuz-Depe upstream the Tedjen and Altin-Depe along the Akmazar in the piedmont zone. Both these sites now grew in size, although in course of time the latter grew larger (48 hectres) than the former (10·2 hectres). In fact, it was only Altin-Depe which could become the second largest settlement of Bronze Age south Turkmenia, partly because Tedjen was still suffering from tectonohydrological imbalances while Akmazar and Chacha rivers were more stable. But starting from the humble beginnings in the Yalangach period, the site passed through the evolutionary stages of Geoksyur period and Namazga IV period. It was finally deserted at the beginning of Namazga V times. The story of the growth towards urbanism in south Turkmenia was then picked up exclusively by Namazga-Depe and Anau. (See chart No. 1 of cultural correlations as worked out by different authors on the basis of their own work in different regions of south Turkmenia).

The region of Meana-Chacha was, however, inhabited even before the Yalangach period—the sites of Mondjukli-Depe and Ilgynly-Depe were occupied during the Late Neolithic and Early Chalcolithic periods (upper Djeitun Culture and Anau IA Culture, respectively) and, therefore, the birth and growth of Altin-Depe was not an effort in the direction of breaking new grounds, although the actual site of Altin-Depe was first occupied not by Anau I people but by the Yalangach people of Tedjen Delta. Lytsyna's geomorphological work in this region clearly demonstrates the favourable aspects of river gradient and alluvial deposit for agricultural growth.

With the end of the Geoksyur Culture and the growth of Altin-Depe in Namazga IV times a very significant factor emerged in south Turkmenian cultural integration. From Khapuz-Depe to Anau, and also beyond, regional differences were now subordinated to the dominant aspects of Namazga IV culture, in pottery, in metallurgy, in modes of disposal of the dead, in religious figurines, and various other traits. That again is the in-born tendency of urbanism. The recent history of European Civilization bears it out : the variety of the medieval age was obliterated by the growth of modern urbanism based on Industrial Revolution.

The concept of cultural uniformity is not the negation of regional peculiarities which arise out of ecological and historical reasons. If belonging to the Namazga IV times, the Western sites, like Ak-Depe, near Anau, have yielded a burnished grey ware (Fig. 3.4) it should be taken as a result of a situation in which northern Iran, through Tepe Hissar III A-B, was responsible for this trait infiltration. It may be noted that this ware is only occasionally present at the Eastern sites of Ulug-Depe, etc. It is what it should have been.

Growth of urbanism is closely related to artisanal specialization, although in the beginning it may not have involved the full-time professional activities. The qualitative achievements of specialists like metal workers and textile workers soon lead to quantitative production to the extent it becomes a surplus required for the exchange of similar goods or raw materials not locally available. The whole process leads to inter-regional trade network. During Namazga IV times that what happened. South Turkmenia brought into its effective trade orbit northern Iran, Afghanistan, Siestan, Baluchistan, and the Indus basin. The evidence of metal objects, beads, pottery, etc., demonstrates the birth of what Tosi (1973-74, 59) calls 'subcontinental trade network'. Underlying this phenomenon, he traces two

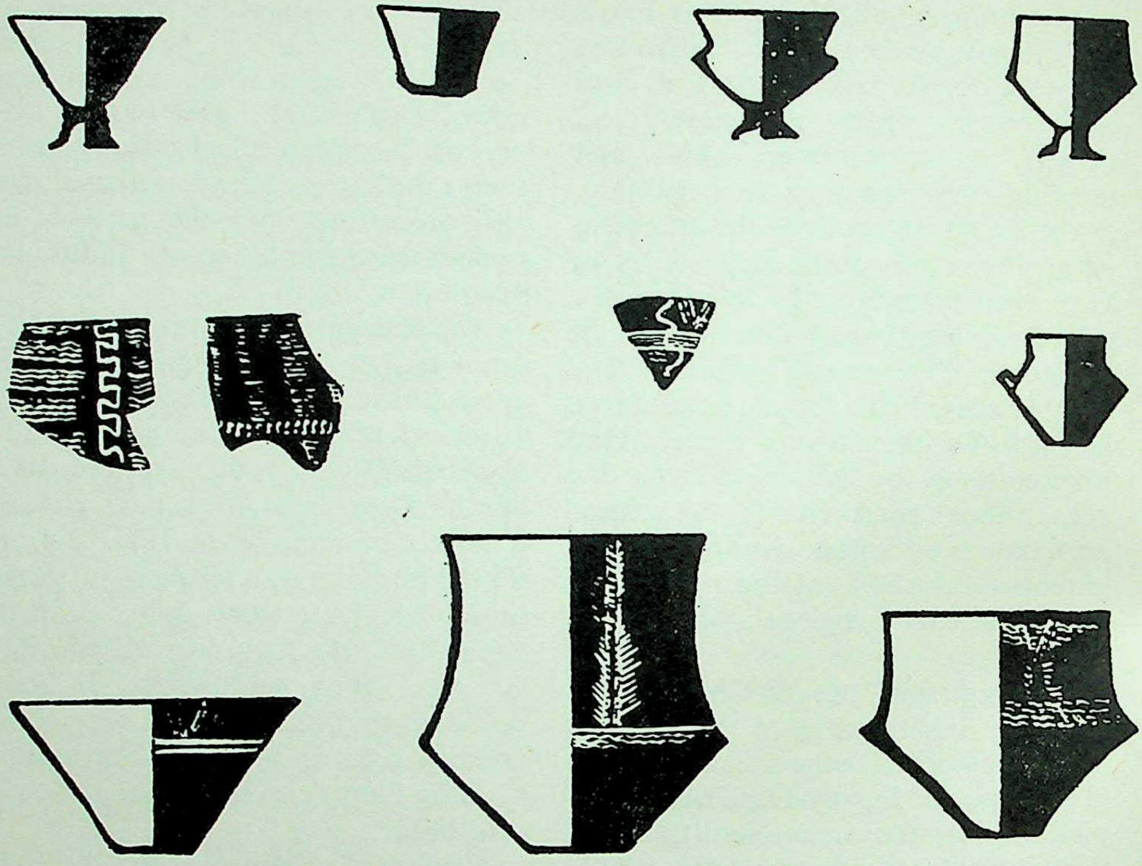


**Fig. 3.4. Plain and painted Grey pottery from Ak-Depe (Early Bronze Age)**

interrelated causes: an increasing selective demand for finished products and the formation of a social class capable of producing goods that would otherwise not be available. The whole idea is that the directional changes towards urbanism that were now occurring in south Turkmenia were bringing about in its wake not only economic changes but also social changes and both were interrelated in the newly emerging operative system underlying the entire cultural dynamics. The new system had a new pivot at Altin-Depe—the priestly class. For the first time a large terraced temple was built on Mesopotamian analogy and we may not be too far from the mark if we deduce that the politico-economic authority now slipped into the hands of the full-time priests who were primarily responsible for the extra-mundane concerns of the people.

**Town-planning and Houses**

On road to urbanism now we have large houses in the four big settlements. At Altin-Depe a common house had now four interconnected rooms besides a few small store-rooms and attached courtyard (Fig. 3.5). The houses were generally linked with each other by a thick common wall. Bigger families and comfortable living were now the hall-mark of the new socio-economic order. Besides Altin-Depe, Ulug-Depe also has given evidence of

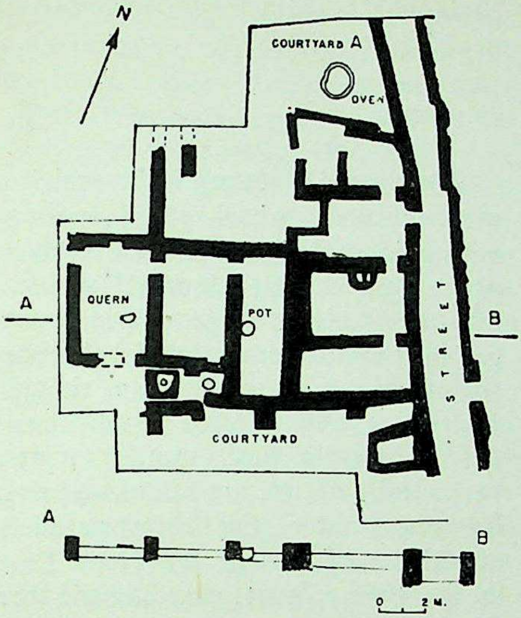


**Fig. 3.5. A complex of two houses, in (joined at T shaped junction) phase 5 of Altin-Depe, Namazga IV times. Each house consists of four rooms**

big houses with interconnected rooms, both living and domestic. They were found clustered in two complexes, flanking a street. At Khapuz-Depe also in a very small area, 150 sq. m, a single compact dwelling consisted of ten interconnected specious rooms with round hearths dug into the floor. Kitchens with similar hearths were separate. The discovery of two clay podiums in one of the rectangular rooms indicates that there may have been domestic shrines also. We have almost similar evidence from Ak-Depe, a small site near Ashkhabad. Here a complex of twelve rooms, including living rooms, domestic rooms and shrine-rooms, has been encountered. Store-rooms with large vessels embedded in the ground are extra. The floors and walls of some of the rooms were faced with alabaster, possibly used as a water-proofing device.

With the growing size of the houses, according to the excavators, a new feature also seems to have appeared in town-planning : fortification wall. Unfortunately, most of the Namazga IV settlements excavated so far have been only partially excavated and we do not have adequate knowledge about their layouts. However, Altin-Depe has yielded a doubtful evidence of this kind. Here a massive wall, 60 m thick and about 5 m high, was encountered on the north-eastern edge of the township. The outside surface was buttressed by projecting pilasters measuring 0·5 sq. m. Unfortunately, this wall could not be traced in other trenches. And since even at Ulug-Depe no defence wall was found, the Altin-Depe evidence remains enigmatic. In fact, there is some strong archaeological evidence to suggest that the so-called Altin-Depe defence wall formed part of an individual house which may have been used for some specific administrative purpose.

### Selected antiquities and Chronology

The archaeological remains from these sites now include certain valuable items which were undoubtedly imported from long distances and various sources. Turquoise, carnelian, lapis lazuli, tin and silver, fall in this category of items. Turquoise came from Kysil Kumy outcrops, lapis from Badakshan, tin from Bukhara and Fergana. It is possible that Khapuz-Depe played an important role in this trade since its location on the Tedjen was strategic for the whole south Turkmenia. Altin-Depe, the bigger site, and possibly more organized, was certainly of greater consequence in this trade network. Since objects of the same materials have been found in the contemporary levels of Shahr-i Sokhta (II-III), Hissar (III B), Yahya (IV B) it is proposed (Tosi 1973-74, 60) that the entire region passed through a similar phenomenon in long-distance trade. Of the various organs and stages visualized, with which, we may or may not agree with him, the most important has been the 'transit markets,' in some of which, such as Sokhta, the raw materials (lapis) were changed to semi-finished stage. At Sokhta beads of semi-precious stones were thus treated before actually exported to south-western markets in Iran and Mesopotamia; the example of high quality of finds in the Royal Graves of Ur has been quoted. The underlying idea is that the trade-mechanism involved in the long distance overland trade is likely to have been, during this period, a very complex process.

The chronological position of Namazga IV is rather fluid. The $^{14}C$ dates from Altin-Depe and Ulug-Depe place it between 2200 and 2000 B.C. while Sarianidi and others place it in 2700-2200 B.C. bracket which is more probable in the light of archaeological correlations with all the neighbouring regions—Iran, Afghanistan and Indian sub-continent. Obviously, MASCA corrections alone can justify the date proposed by Sarianidi. Tosi (1973-74, 61) compares Shahr-i Sokhta III (from Tepe Rud-i Biyaban-2 dates) with phases 4-5 of Altin-Depe (uppermost levels of Namazga IV) and places it between 2300 and 2200 B.C. which also fits in very well with the overall chronological framework now valid for South Asia. Obviously, Masson and Sarianidis' (1972) chronology has to be drastically revised.

## POTTERY

Namazga IV pottery is basically a monorchrome wheel-turned pottery with painted designs executed in black or brown over light red or buff surface. The painting is purely geometric, arranged in friezes; faunal and floral representations are extremely rare, though interesting. On isolated vessels, besides schematic bird motifs, goats, realistically drawn, are found standing between two trees, the nearest parallels of which are found in the Near East in the theme 'goats guarding the tree of life'. At Khapuz-Depe (Sarianidi 1964 and 1965) the painted motifs are very close in style to that of the motifs occurring on pottery from the latest levels of the Geoksyur Oasis. However, now the patterns became so minute that the friezes turned somewhat clumsy, confused and crowded. The steps of the pyramids, the edges of the squares, the zig-zags and the outgoing branches of the plant motif are now marked by microserrations (Fig. 3.6)

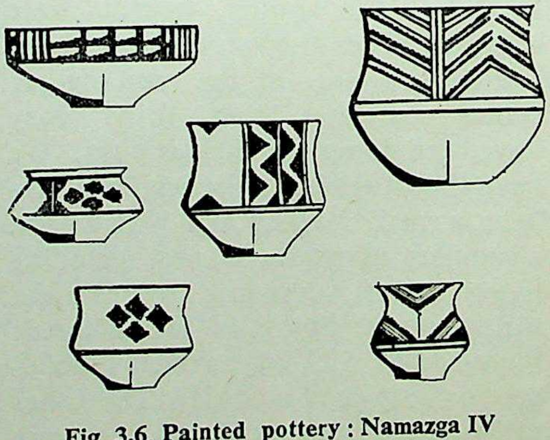


**Fig. 3.6. Painted pottery : Namazga IV (Early Bronze Age)**

which must have taken a lot of time and patience to do the job. The pottery types from Khapuz-Depe, some of which were turned on wheel, for the most part contained goblets with somewhat straight sides and sharply sloping base as well as hemispherical bowls and cups, conical cups and ribbed vessels. Except for the last mentioned type, the pot-forms have their roots in the earlier group, the Late Chalcolithic of the Geoksyur region.

While at Khapuz-Depe the wheel-turned pottery developed only with the passage of time, at Altin-Depe we get more than 80% pots of this variety, and in a very good texture, almost from the very beginning of Period IV. The painted designs were, however, of the Khapuz-Depe type, only better executed.

At Ulug-Depe (Sarianidi 1969) the pottery is of the Altin-Depe type both in form and painted designs, although along with the red ware, a lighter coloured pottery also exists. At this site, interestingly enough, a 'double pot' with paintings was also discovered.

At Namazga-Depe, and also Anau, a similar pottery has been found, some times in unusual forms, *e.g.*, a high-necked water-pitcher with short trunk and long bottom, the sloping shoulder beautifully painted, and a disc-based vessel with carinated profile, the neck being painted with plant motif enclosed in stepped logenzes with a majestically standing goat with highly curved horns amidst plants (Fig. S.3.2).

This kind of pottery characterized the whole of south Turkmenia, a few local variations apart. It falls within the Central Asia's own developmental sequence. But it should not be imagined that within this broad gamut of Namazga IV pottery no outside tradition penetrated. At least at sites like Ak-Depe near Ashkhabad, along with the usual red and cream wares, a sufficient quantitity of partially burnished grey ware with incised decorations was found. Also were found sharply carinated 'goblets of bizarre shape standing on crimped, often hollow, pedestals'. The fine incised decorations comprise groups of vertical stripes or horizontal wavy lines. Interestingly enough, there are some applique motifs of coiled snakes. It is significant to note that a limited quantity of this grey ware has been found at other sites also. But where lies the source of this ware? . . Probably, on the northern borders of Iran, at sites like Tureng-Tepe and Shah-Tepe where this kind of ware was widely prevalent in the third millennium B.C

## THE KILNS

We have some intersting evidence of the kilns used for firing the earthen pots. The Namazga IV kilns were more elaborate and scientific than the kilns made in Namazga III times. While the earlier ones were single tiered, the later ones have been double tiered. In the new kilns, 'the firing chamber was built over the brick-lined furnace. A vertical partition or a thick pillar was built into the centre of the furnace to support the firing chamber above it while the horizontal partition dividing the two chambers was perforated at many places to convey the heat'. The fire wood was inserted through a special wide opening. The firing chamber had a brick-lined dome over it. There was, however, a provision for a special gate through which the leather-hard pottery was passed into the kiln.

It was a slightly complicated affair to operate it and keep the required temperature in the chamber. However, when seen along with the introduction of potter's wheel, we may imagine the birth of a professional class of potters.

Such kilns have been found both at Namazga-Depe and Khapuz-Depe (Sarianidi 1964)

## METALLURGY

A similar situtionexists in the field of metal technology. At Kapuz-Depe two copper-smelting furnaces have been found, practically at the outskirts of the habitation. Near the furnaces not only copper slags but also clay ladles with traces of molten copper have been found. But we do not have enough data to work out the entire process of copper smelting. In any case, the evidence proves local-production of objects.

## FIGURINES

By and large, the terracotta and stone figurines follow the iconography of the preceding period, yet some are certainly characteristic of the period. In a large number of examples, the female figurines, shown seated, are without arms and breasts. This was in the Late Chalcolithic style of the Geoksyur Oasis. Khapuz-Depe has yielded some very good examples of this type of figurines. All these observations are also applicable to the 'seated figurines with exaggerated female sexual attributes'. The figurines were decorated with-incised patterns unlike those of the previous period which were sometimes beautifully painted. A sufficient number of them, it is interesting to note, had coiffures in the form of two straight plaits falling on the breast and a third plait down the back. It may be recalled that this particular style had first appeared in Namazga III times but now it was greatly elaborated and popularized.

Excavations at Altin-Depe have, however, yielded two somewhat unique terracotta figurines. One is of a sitting pregnant woman with the protruding stomach covered in small pin-pricks and the other is of a mother goddess with a coffiure of short plaits flanking her face. The former appears to be of a realistic kind although the presence of the pin-pricks would bring even this figurine into the overall category of mother-goddess. From Namazga-Depe also a unique figurine has been found, with only one analogy from Altin-Depe—the figure has one arm held against the body and the other bent at the elbow with the hand touching the face. A small number of terracotta figurines have been shown seated on pedestals which are only the extensions of the lower part of their bodies. To that extent, they are comarable with the seated mother-goddess figurines from the Zhob Valley in Baluchistan. At Altin-Depe a flat plaque like statuette has also been found which, in technology at least, is like some of the examples found at the Harappan sites of Lothal, Harappa and Mohenjodaro and the pre-Harappan sites like Gumla, Hathala and Jalilpur (Fig. 3.1).

Besides these terracotta figurines, at Namazga-Depe a beautiful torso of white marble has been found. In technique, it was somewhat nearer to the Harappan figurines since the figure was conceived in two parts: the top has a well carved socket to receive the tennon of the missing head. May be, a stone figure like this was intended for the public worship.

Along with these female figurines, we have a small number of male figurines. Highly schematic in the treatment of the face, they are marked by exaggerated phalluses. They, therefore, also tend to emphasise the generative aspect of the human body comparable with the generative aspect of the earth.

In contrast to these soft-red terracotta figurines, usually shown in seated posture, we have a group of grey coloured standing miniature figurines from Ak-Depe near Ashkhabad. The comparable examples, however, come from Tureng-Tepe in northern Iran and not the Indus plains.

From sites like Altin-Depe we have a small number of terracotta wheeled carts. The frame of these carts is attached with the long necks of camels. Clearly, the carts are shown drawn by this majestic animal of the deserts. Indirectly, it goes to show the existence of deserts in the vicinity of the habitations and the important economic role that the camel played by being used as a draught animal.

### SEALS

The Early Bronze Age developed a society which was becoming complex, at least economically. Possibly, the necessity of seals emerged out of this changing pattern of everyday life of the people. The model for these seals was found in the amulets which seem to have played a very significant role in the Late Chalcolithic times. At Ulug-Depe excavators have found some square seals, carved in stone as well as made of clay. Their faces carry a number of geometric patterns familiar to us from the painted designs occurring on pottery (Fig. 3.1). In some of the examples of stone seals, the decorative patterns were created by drilling small holes along the contours of the designs. This is exactly the technique adopted by the people of Mundigak in Afghanistan. The similarity between the Central Asian and Afghan seals is so striking that it has become extremely difficult to say who borrowed from whom. But one thing is clear from the discovery of terracotta seals carrying painted-designs occurring on pottery, that locally also the seals were made. By and large, the seals are having two perforations in the centre to carry cord for suspension; the system of knobbed backs had as yet not developed.

### STONE CARVING

The carving of stone seals was not an isolated phenomenon. It has already been mentioned that a torso of white marble was found at Namazga-Depe. In this context it is significant to note that besides seals and statuary, beads and pendants were skilfully carved out of a variety of semi-precious stones. One of the most noted types is a biconical ornamental piece. The drilling, carving and polishing of these colourful beads certainly indicate the achievment of a high degree of perfection in the art and craft of stone carving.

This observation is further supported by the discovery of a number of beautifully carved small cylindrical stone vases. The most significant aspect of the technical skill achieved by the stone carvers was the symmetrical shape of the pots that they could maintain.

### TOOLS

The Namazga IV tool-kit contains

implements, made of stone as well as low-grade bronze and copper (Fig. 3.1). The stone tools are marked by the presure-flaked bifacial arrowheads of two types: the leaf-shaped and the tanged variety. The former is plain in outline while the latter is retouched at the tip and faceted (three side faceting) at the tang. At Khapuz-Depe as many as fifty examples of these tools have been found. Since the site is far away from the mountains it has been surmised that flint, the raw meterial used for making these tools, was traded. Trade in flint was, however, not a new phenomenon, in the Chalcolithic times also it was an important factor in the economic life of the people living in areas removed from the mountains.

At Khapuz-Depe a small number of metal tools have also been found. However, they lack variety as well as heaviness, the two features which clearly show that copper-bronze technology was at a much lower stage than the other contemporary cultures in Iran and India. Once again we quote the examples recovered from Khapuz-Depe. They included awls, piercers, needles with eyes, long pins with flattened heads and miniature pins with bipyramidal tops, pins with heads in the shape of a stepped pyramid or cruciform object.

The decorative elements of the metal artefacts were also borrowed from the repertoire of the designs and motifs painted on pottery. It may, therefore, be seen that, by and large, all the industrial out-put was local, and in matters of decorative elements the practitioners of every art borrowed freely from the central pool.

## BURIALS

The disposal of the dead was through complete inhumation. The dead bodies were buried both singly and collectively in rectangular chambers built of mud-bricks. It is significant to note that while single burials characterize the Central zone sites, like Namazga-Depe, the collective burials characterise the sites located in the South-eastern zone, like Kapuz-Depe and Altin-Depe. This differential distribution of the two practices is, however, not accidental. It may be recalled that in the earlier period, Namazga III times, the Eastern zone, comprising of the Geoksyur Oasis, was characterized by collective burials in *tholoi*. And, since, in all probability, when the people deserted the Geoksyurian sites, they came and settled down in larger numbers in the nearby sites of South-eastern zone, suchas Altin-Depe, just 50 to 60 km. away, as the crow flies, than going to far off sites in the Central and Western zones, such as Namazga, beyond 100 km. the sites in the South-eastern zone witnessed the occurrence of collective burials in larger numbers than the sites in the Central zone. This analysis is, of course, based on the fact that the funerary practices of the Namazga III times continued to be followed in the Namazga IV times. Rituals connected with death always last longer than the changes which mark the material culture.

As said in the introductory part of this chapter, there is a case for the division of Namazga IV into an earlier and a later phases. This is borne out not only by the changes observable in the material equipment but also in the funerary practices. In the early phase of Namazga IV, the dead were buried collectively in single separate chambers, but this was not the case in the later phase. In Period IVB, if we are allowed to use this term for the later phase. It is extremely significant to note that the graves were not dug in the habitational areas as was done in the Central zone sites in Namazga III times, but in the abandoned parts of the settlements as was done in the Geoksyur sites of Namazga III times. Thus the concept of cemetery of the Geoksyur Oasis was maintained, although with marked modifications. Now long chambers were built and then divided into several rooms with the help of of thin partition-walls. These were then used for burials, probably, collectively by a whole clan; a single chamber might have been allotted to a single family.

As time went by, the grave offerings, usually earthen pots, diminished in number. However, a particular type of vessel carved out of marble-like stone was most commonly found—the oil lamp. A typical lamp of this complex is cylindrical, with its base somewhat tapering. The upper part exhibits a shallow depression which was covered with a lid having a hole in the centre. In one example at least, a wick was still sticking to the lid. The discovery of these lamps has been interpreted in two terms: that the funerary rituals became much more comlex than what they were earlier, and that the other world was imagined as a place clad in absolute darkness, needing the help of the burning lamps for seeing the path.

## FAUNA AND FLORA

Domestication of animals and plants is a constant process, once the attempt started in the Neolithic it never ceased. Even these days experiments are made to bring in more and wild species into the orbit of the domesticated ones. In Namazga IV times camels appeared for the first time (Fig. 3.7). Osteological evidence of slaughtered animals prove it. Clay figurines of camel from Altin-Depe and Ulug-Depe, as said earlier, at the head of terracotta toy-carts from the former site, further support it. Starting from the Gobi deserts, it seems to have moved into Western Asia in the early third millennium B.C. Its presence in the Harappan context has also been attested on the basis of both the osteological studies and terracotta figurines.

Some recent studies (Ermolova 1971, 205-232) show that in the predesertic steppes goat and sheep had already started replacing beef, cattle and

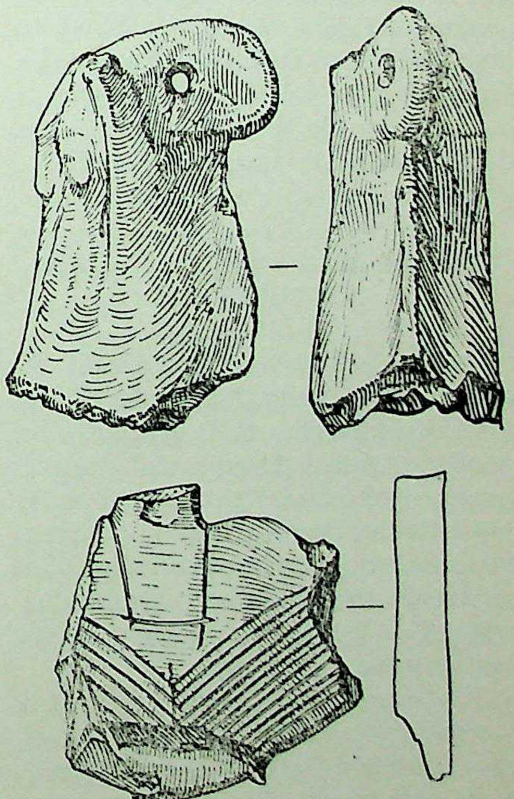


Fig. 3.7. Camel heads from Namazga

pigs, It must have had its own effects on Namazga IV sites. Large herds of goats and sheep may have augmented the food supply.

Agricultural produce is also likely to have increased not only in quantity to support the large concentrations of human population at the protourban settlements but also in diversification of the species. We do not have much evidence of this kind as yet from south Turkmenian sites but Shahr-i Sokhta and other sites do give us complete evidence for this kind of change in this region. However, grape-vine does appear at all the Namazga IV sites. It is easily grown in semi-arid climate and is suited to calcareous soils. It really improves the quality of sugar-based diet as sugars were very hard to get in any semi-arid region in pre-industrial times. It is significant to note that it also appears in Sokhta II-III and Yahya IV B and A. Thus it covered the entire protourban region of contemporary Iran (Tosi 1973-74, 64).

## CENTRAL ASIA AND THE INDIAN BORDERLANDS

In the Early Bronze Age, a kind of cultural uniformity was achieved in south Turkmenia. It is reflected in pottery, painted designs and motifs, terracotta and stone figurines and seals, domestic architecture, burial practices, etc. However, some local variations and preferences could not be avoided; due primarily to the geographical reasons and heritage.

The site of Ak-Depe near Ashkhabad was thus linked with sites like Tureng-Tepe and Shah-Tepe in northern Iran as the occurrence of incised grey ware in all the three sites clearly establishes. Similarly, sites like Khapuz-Depe in the eastern part of south Turkmenia was linked with sites like Mundigak in Afghanistan, Baluchistan and other regions of Indian boderland as the presence of certain types of seals, terracotta figurines and burial practices clearly shows. It must, however, be understood that several vast geographical areas between south Turkmenia and India still remain unexplored or ill-explored and, therefore, we are faced with the problem of working out precisely the route of contacts. During the period under consideration, unfortunately, the Geoksyur Oasis was completely deserted. South Turkmenia's habitational geography, therefore, did not remain the same as in Namazga III times. But one thing is clear, the region consisting of southern Turkmenia, northern Iran, Siestan, southern Afghanistan and Baluchistan forms a distinct culture-interaction area in which archaeological evidence of movement of peoples and ideas can be easily picked up but in which the phenomenon of colonization, *i.e.* 'occupation of a region by an alien people identifiable archaeologically, can not as yet be easily worked out. In fact, each area was practically autonomous, developing its own cultural form in spite of the fact that they are likely to have intimately shared each other' experiences through the mechanism of trade network.

As far as south Turkmenia's own cultural history is concerned, the period certainly mark a qualitative change. The multi-roomed houses, the technological development in pottery making, and copper smelting and forging, stone carving and seal engraving, standardization achieved in making magico-religious figurines, etc., clearly establish the directional changes in which some of the rural settlements started moving towards 'urbanisation', a term whose conceptual implications will be dealt with later.

### Middle Bronze Age :
#### Namazga IV (Upper Levels) & V

The proto-urban culture of the Early Bronze Age developed very soon into the full-fledged urban civilization of the Middle Bronze Age. The Middle Bronze Age is equated with Namazga V which is bracketed by Masson between 2000 and 1600 B.C. ± 100 years. The beginning of this period coincides roughly with the end of Namazga IV lastest building level ($^{14}$C date : 2120± 100 B.C.). This was the period in which the Harappan Culture had also reached its zenith and some of the Iranian and Mesopotamian cultures maintained a high degree of material and moral culture. Their cultural interaction is clearly reflected both in small antiquities and monumental structures.

During the Middle Bronze Age, south Turkmenia developed a distinct cultural style in which certain elements of West Asian model were brought in to cross-fertilize with the local elements. However, it does not seem to have worked well since south Turkmenia could not develop the kind of urban life-pattern with writing and a chain of cities along with their own villages as was the case with Mesopotamia and India. There were only four centres—Namazga-Depe, Ulug-Depe Altin-Depe and Khapuz-Depe, each separated from the other by more than 50 km., a distance too long for the contemporary Mesopotamia and the Indus towns. Furthermore, the sites north-west of Ashkhabad, such as a Dashly-Depe and Ekin-Depe, disappear. The settlements in the Artyk region are still very small, hardly two acres each, and, therefore, do not at all seem to have passed through the urban channel. May be, the geological limitations and hydrological problems stood in the way of cultural development. May be, due to its being a land-locked country, without any opening through the sea or navigable rivers, it had to face the hurdles of communication. And, may be, it could not develop a political or administrative structure and social leadership to match with the Mesopotamian and Indus kind which always lie at the back of all great achivements. Whether the causes of somewhat retarted growth of the Central Asian urban culture have been many or just a few, the fact remains that when compared with the Mesopotamian and Indus city civilizations, the south Turkmenian cultural-milieu appears to be more of a restricted kind, somewhat comparable with those developed in northern Mesopotamia, Syria, and parts of Palestine and Turkey.

Such a qualitative comparison and value judgement in historical studies is, however, basically wrong. Each culture is afterall a unique creation of its own circumstances and its pattern and style must be appreciated on its own terms. Obviously, historical evaluations aim at only finding out the reasons behind cultural variations which are always found existing in the world.

South Turkmenia's urban centres successfully maintained culture-contacts and trade relations with the conteemporary Orient, yet, as said earlier, basically it gave birth to a culture-complex which developed out of its

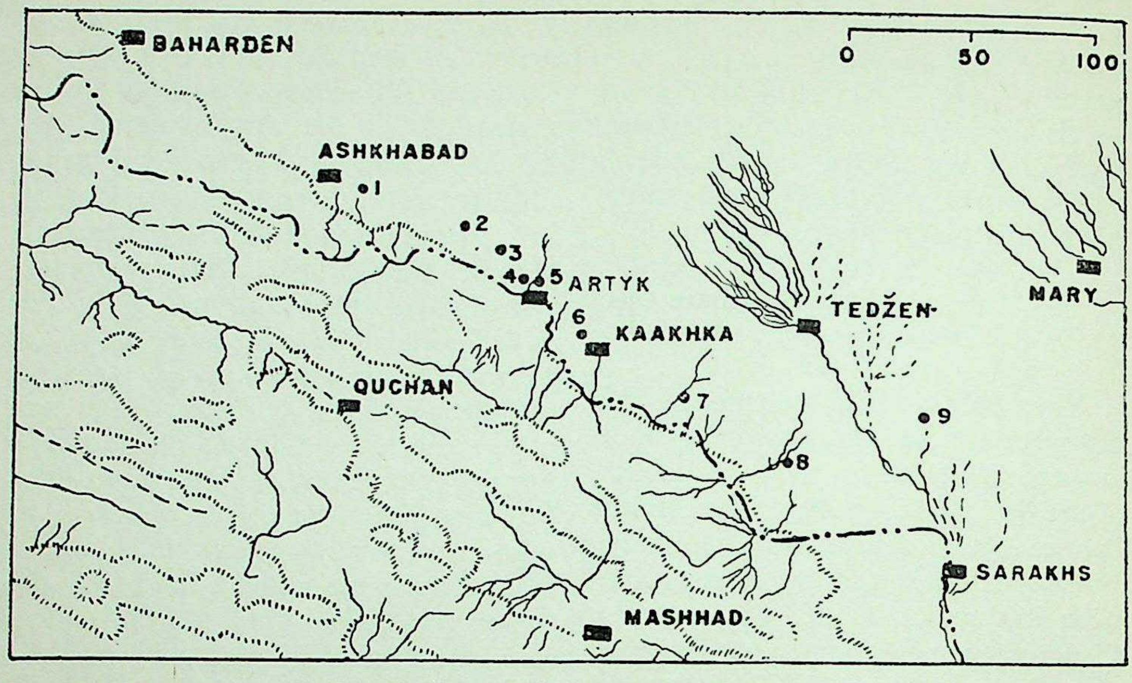


**Fig. M. 3.2. Namazga V (Bronze Age) Sites**

**1. Anau**
**2. Shor-Depe**
**3. Kosh-Depe**
**4. Taichanak-Depe**
**5. Kara-Depe**
**6. Namazga-Depe**
**7. Ulug-Depe**
**8. Altin-Depe**
**9. Khapuz-Depe**

own immediate past, which itself was not very rich. The periphery of the Fertile Crescent beyond which it thrieved was far from the blessings of nature. Thus, whatever was achieved has to be attributed to the genius and the will of the people. It is in itself a great thing; in fact, greater than anything else.

With this much of preface, we may begin with a general introduction on pottery and a few details of the two capital-like cities of Central Asia : Namazga-Depe and Altin-Dape.

The Middle Bronze Age of Namazga V times (Masson 1956) is marked by a slightly yellowish slipped and red washed pottery, consisting of about twenty basic types (Fig. 3.8). It is extremely significant to note that the pottery was completely devoid of paintings, although fully turned on wheel. It was a great departure from the immediate past since the Early Bronze Age pottery, partially wheel-turned and partially hand-made, was beautifully painted. This complete departure from the past has been intriguing. Was it due to the arrival of an alien people or just a sudden change in fashion? We do not know; partly it may have been due to the mass production on fast wheel which does not allow time enough to be devoted to further embelishment. The pottery, as a whole, is made of well levigated clay producing a very smooth surface, except for some faint striation marks left behind by the fast moving wheel.

In typology, some of the shapes

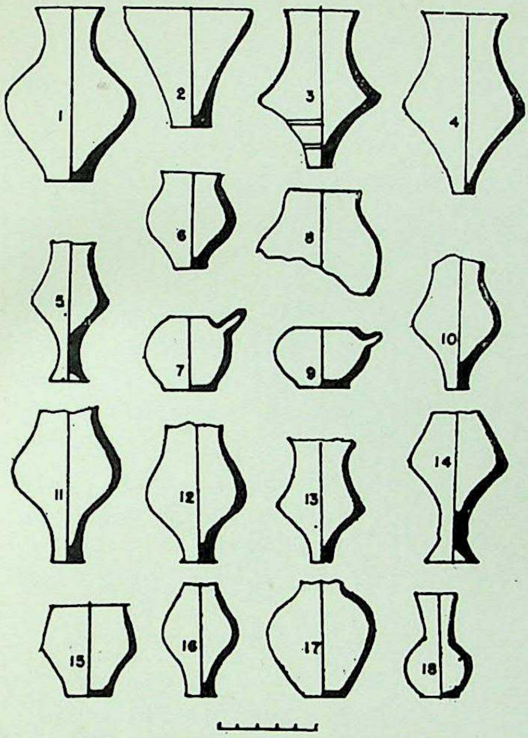


Fig. 3.8. Pottery types from Namazga V levels

were new while the others were the modified forms of the earlier variety. Amongst the new forms are included deep bowls with short tubular spouts, vases with highly carinated and angular profiles, incurved carinated tall bowls on high flaring pedestals with corrugated stems, vases with tall necks and globular bodies tapering slowly towards the bottom, shallow dishes, tulip-shaped basins and short flasks with flat bases, round body and tall neck. (Plate VIIIa, b, c, d, e, f, g).

## NAMAZGA-DEPE

The pottery of the above mentioned kind was found not only at Namazga-Depe but at all the other sites of the Namazga V times. But Namazga-Depe was certainly the largest site, its ruins sprawling over about 170 acres of land (Litvinsky 1952). The entire surface of the site is undulating; in fact, marked by a series of rolling mounds, each one indicating the existence of either a monumental structure or a huge residential or industrial complex of the bygone days (Fig 3.9). The total deposit is fantastic, some 34 m thick, with a number of structural levels. Although no conscious planning of the township can be established, yet the housing complexes have been found arranged along narrow streets. Normally, four houses made a block. Blocks were further separated by streets or lanes, about 1·5 to 1·8 m wide. A single residential house covering more than 200 m (2·5 m wide) was multi-chambered, consisting of as many as a dozen or more rooms with open courtyards. Domestic chambers had deep niches in the mud walls for keeping pots as well as stoves needed for heating.

At Namazga-Depe a religious complex was detected, although it was found buried under a big cemetery of the later period (Sarianidi 1962). It is located on the south-eastern section of the site. The suspected shrine was built of walls made of not the regular bricks but the blocks of clay, often a metre thick. It contained a number of narrow rooms, all opening in a large square courtyard. Since no other specific appendage establishing the utilitarian nature of the building was found at the site, the interpretation of the excavators is largly hypothetical.

In another sector of the site coppersmithy was detected. Here a number of metal-smelting furnaces were found. Near them copper slags and broken terracotta laddles with traces of mol-

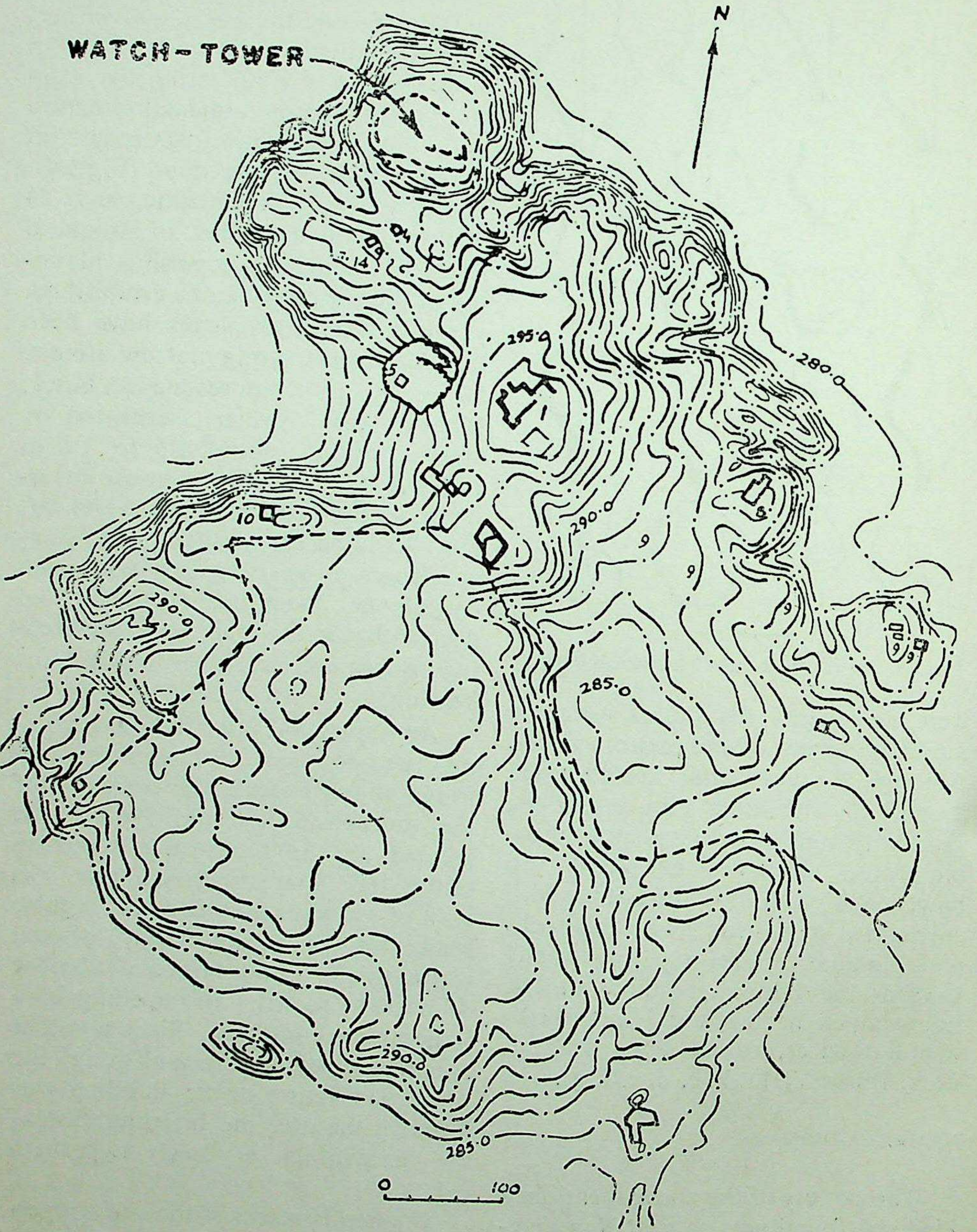

WATCH-TOWER
N
280·0
295·0
290·0
290·0
285·0
290·0
285·0
14
10
0
100

**Fig. 3.9. The ancient mound of Namazga-Depe**

ten metal were found. Some small houses clustered round these workshops. Obviously, these were the workmen quarters.

In a nearby area the remains of pottery kilns have also been found. In one of the potter's houses, interestingly enough, a large earthen cist full of fired pots has also been located. In this context, a very significant point may be noted : the kilns were of two-tiered variety, exactly of the same type as found in the preceding period at Altin-Depe.

Excavations in some other areas have also shown that here we are dealing with a society whose economy was changing radically from the agrarian stage to industrial stage with its concomitant social structure based on professional tiers, whose exact nature, however, we shall never be able to know since no written records are available.

## ALTIN-DEPE

About the various facets of cultural and economic life of the people of the Middle Bronze Age, we get more details from the excavations conducted at Altin-Depe (Masson 1968). Although this site is slightly smaller than Namazga-Depe, being only 114 acres in area (Fig. 3.10), yet here the excavations have been more systematic and the archaeological remains better preserved.

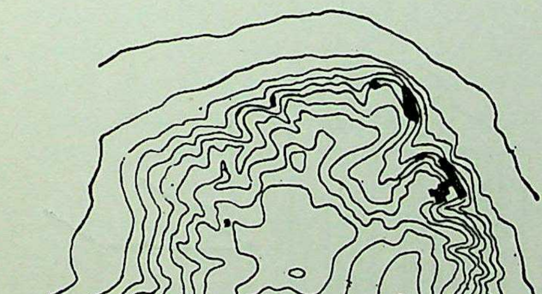


**Fig. 3.10. Altin-Depe : plan of the mound and location of the trenches.**

As was the case with Namazga-Depe, the town was not pre-planned; it kept on growing as the time passed. The only thing that seems to have happened was the emergence of some kind of professional and functional division of the township. But this is implied in the very process of socio-economic changes through which an agrarian society passes while adopting the industrial frame-work for its own well-being. It is vastly different from the thoroughly planned cities of the kind we meet in the Indus Valley. But it does not mean that it was comparable with the Mesopotamian towns either whose planning, whatever it was, emerged in the frame-work of priest and autocratic kingship ridden society; the Central Asian cities seem to have been developing themselves in the frame-work of their own social norms with the minimum of coercive administrative set-up. It appears that each living-area and each monumental structure was conceived separately without any consideration of the existing structures, open spaces and roads and lanes.

Be that as it may, at one stage of the early phase of the Middle Bronze Age at least the Altin-Depe people decided to have a ziggurat in their town. Both the idea and the planning of the religious edifices connected with it seem to have been borrowed from Mesopotamia, although in a very clumsy fashion.

The ziggurat complex was established in an area separated from the main township. When chosen for the shrine, it was already a considerably high place, the ruins of the houses of the Namazga IV period were responsible for adding this height. The mound was nicely trimmed and given a face-lift. It was then neatly faced with mud-bricks, at least on three sides. Once the basal platform was given sufficient stability, three platforms in the receding order, one on the top of the other, were added. Here was thus a four tier structure rising to a height of about 6 m. While clearing the structure, it was revealed that the outer face of the second platform was beautifully decorated with pilasters which were tripple-stepped in plan. The ziggurat was oriented north-south (Fig. 3.11).

But as the time passed, population increased, architectural competency matured and the economic prosperity grew, it was decided to enlarge this structure and give it an imposing look. It was now 45 m long and 12 m high, almost double the size of the earlier building. The height of the basal platform was itself raised to 2 m, the second platform to nearly 4 m, and so on. The outer face of this structure, it is significant to note, still gave the same old look, since it was decorated with the old fashioned triple-stepped pilasters (Fig. 3.11). We have, unfortunately, absolutely no idea about the structure on the top of the ziggurat ; it was anciently destroyed. May be, there was a shrine, as the Mesopotamian ziggurats had (Plate IX).

The ziggurat was, however, not the only building on the mound. Adjacent to it was another structure, called 'Encircled House' by the excavators. It stood on a three metre high platform and its outer face was also decorated with pilasters. It had several rooms, most of which were found completely destroyed. Again, on the Mesopotamian analogy and the consideration of the overall planning and the sizes of the rooms, it is possible to visualize its nature—it was, in all probability, the official quarters of the

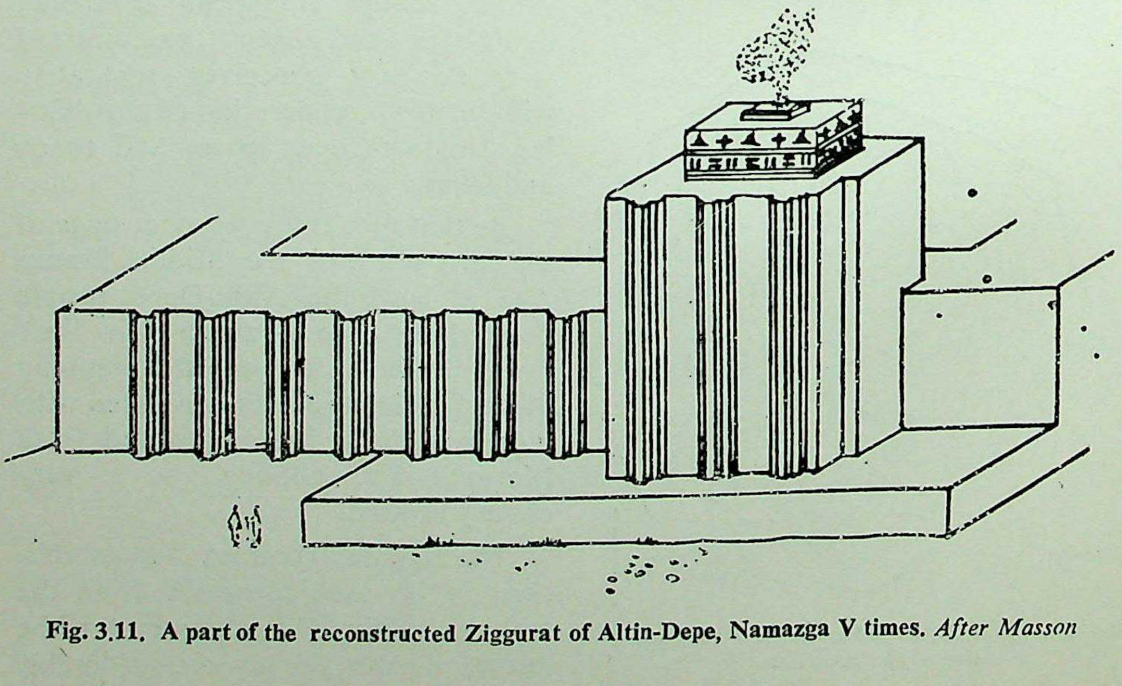


**Fig. 3.11. A part of the reconstructed Ziggurat of Altin-Depe, Namazga V times.** *After Masson*

high priest who stored the offerings in the rooms.

Then the period of decline sets in. No more enlargements, only occasional repairs were done. However, on the southern side of the ziggurat a new structure, called 'Corner House,' was added, increasing the width of the entire architectural complex to about 55 m. In fact, as the excavations progressed, it became clear that there were inherent weaknesses in the structure. The huge mass of mud-bricks without any regular recesses was now giving way at several points. As the remedial measures, the basal platform was thickened and supporting-walls were added on the outer face of the structure. But all in vain, it collapsed in the Middle Bronze Age itself, and then soon abandoned, finally.

Under the shadow of the ziggurat, the township sprawled on the north-western corner of the site. In fact, houses were arranged in close proximity of the ziggurat. The ziggurat itself was reached by an open space running from the southern end of the mound, where now lies a big depression. The houses were, however, not planned along any well-laid streets or roads; sometimes the housing complexes were separated from each other only by open courtyards. The individual houses were, of course, multi-chambered, with attached courtyards (Fig. 3.12). They follow the old pattern and need no elaboration here (Plate X).

What is really important to know is the establishment of professional sectors in the town. One such sector, on the northern end of the mound, is called 'Craftsmen's Mound', spreading over six acres of land. Here as many as ten kilns for firing the earthen pots have been found. Structurally, they were the same as discovered at Namazga-Depe, *i.e.*, of the two tiered variety. In a very interesting example, numerous unbaked objects were found, such as thirty five oxen, fourteen anthropomorphic figurines and eight wheels of toy-carts. In the vicinity of the other kilns, pots in various conditions have been found. They include a number of rejects also.

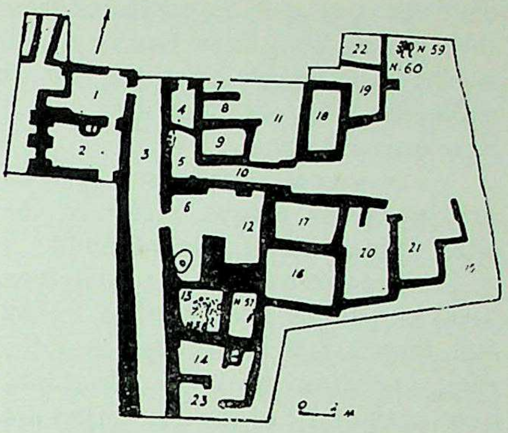


**Fig.3.12. Altin-Depe : Roads, houses and burials. Namazga V.**

In this context, it is significant to note that by the side of these kilns stood several multi-chambered houses of the workmen. These houses were not at all different from the houses in the township. In this respect, Altin-Depe was much different from the Harappan as well as the Mesopotamian towns since in them the workmen-quarters were comparatively very small, consisting of one or two rooms each. Obviously, in this society the social status of an individual does not appear to have been totally dependant either on the profession adopted by him or on the economic level that his family achieved. Of course, this is only a tentative inference. That the potters were not very rich is evidenced from their graves. They were largely devoid of the imperishable offerings, except probably a few bead-amulets, found only occasionally.

We may now consider the remains existing in the eastern sector of the site. It is called "Tower Mound".

In the eastern sector of the city two areas give ample evidence of prosperity and, therefore, it is possible that the elite, including the civil authorities, lived in this part of the site. They are known as 'Mound of the Wall' and 'Tower Mound'. Of these, the former appears to be richer and more elaborate. Here some sort of division of the town in blocks is apparent, although the division neither followed any rules of geometry nor the dividing roads, some two metre broad, and lanes, a metre and-a-half broad. The roads and lanes did not remain straight and of equal width over any considerable length of distance. Obviously, we can hardly think of a municipal authority governing the rules of roads, lanes and traffic on the pattern of Harappa and Mohenjodaro. Still we cannot ignore the fact that at least in this part of the town some effort was made to keep the enchroachment on the streets to the minimum. However, the houses facing them were entered from the well-made doorways leading to the complex of two living rooms, two to three auxiliary rooms, one kitchen and an open courtyard. The total covered area of a house was, however, not more than 50 sq. m, of course, besides the courtyard. The general condition of the houses was, however, quite good since the walls were kept well plastered with clay coatings, occasionally, painted with red ochre. The economic prosperity of the occupants of these houses is borne out by the nature of the antiquities recovered from their graves. In one of the collective burials of fourteen individuals the excavators have recovered two bronze zoomorphic pendant seals, a clay anthropomorphic figurine, rings, beads, arrowheads, a stone vessel and as many as twenty earthen pots. There is also a remarkable single burial, called 'priestess's grave'. It contained the skeleton of a woman holding two female figurines in her heavily ringed hands. The burial-chamber yielded about one hundred beautiful beads of semi-precious stones, such as agate, carnelian and lapis lazuli. Some of them have gold bindings. Some others have paste set in gold covering. The grave has also yielded a pendant seal made of silver depicting a three headed animal, a motif which also occurs on a seal from Mohenjodaro. We will deal with this seal later on. Presently it may also be mentioned that cemeteries were the areas abandoned temporarily, as was the practice in the preceding period. This is precisely the reason why both the collective and individual burials have been found under the houses. It may be noted that it is not the same thing as 'burial below the living-floors widely prevalent in West Asia and western India during the second millennium B.C.

The residents of the 'Tower Mound' were equally prosperous. In at least two examples, the walls of the houses concealed some of the very precious objects. These hoards of antiquities include a variety of objects made of ivory, bone and faience as well as earthen pots, most of which are likely to be imports from distant lands, including the Indus Valley. We will deal with them a little later. But what is significant to note at the moment is the kind of people who lived on this mound : traders and adventurers who held the key of economic prosperity of south Turkmenia. These were the people who were possibly responsible for the monumental structures in the town also. They brought into this far off land what is called 'the developed stage of the early urban way of life'.

### ULUG-DEPE

But the urbanisim of a settlement cannot exist by itself. There must be smaller feeders for them. Usually, a city is surrounded by a few villages and/or small towns which supply agricultural produce and manual labour to keep the city dwellers free from many secondary jobs and allow them to work in specialized fields, such as long-distance trade, activities connected with the construction of monuments and different arts and crafts. But Altin-Depe was not surrounded by smaller settlements. However, a near by site, Ulug-Depe (Sarianidi 1969), covering not more than 25 acres of land, may be taken as a feeder settlement. Except for a housing complex and some graves nothing significant has as yet been discovered in the field of structures at this site. However, some of the grave-offerings are significant from the point of view of city-village interaction. Besides pottery, they have yielded bronze rings and pins, paste beads and a stone censer which do not seem to have been manufactured locally.

### SMALLER SETTLEMENTS

There are a few smaller settlements also, near Altin-Depe as well as Namazga-Depe (Skchetenko 1968). They are rarely more than 5 to 6 acres in area, for example, Khapuz-Depe (Sarianidi 1965) which falls into the Altin-Depe zone on the Tedjen. Shor-Depe, Taichanak-Depe, (Shchetenko 1969) and South Anau have been only a few of the several feeder villages for Namazga-Depe. Each one of them is, however, marked by multi-chambered houses with small courtyards, huddled together without any consideration of proper approach. But Shor-Depe has yielded a zoomorphic bronze seal, certainly imported from Namazga-Depe. Similarly, from Taichanak-Depe the excavators have collected a silver seal, besides a number of female figurines and wheel-turned pottery of a very fine quality. The seal, at least, was an import from Namazga-Depe or Altin-Depe. These examples clearly establish the fact that there was a close interaction between the cities and the villages.

### AGRICULTURE

The urbanism of the Middle Bronze Age would not have been possible unless there was sufficient agricultural produce to support the non-agriculturists of the cities. But we do not have detailed information about the agricultural produce from the excavations, either at Namazga-Depe or at Altin-Depe. In fact, we have much more data belonging to the chalcolithic period, from areas like the Geoksyur Oasis where irrigational channels have been clearly marked out (Lytsyna 1969). South Turkmenia, as said earlier, was not a favoured child of nature and irrigational difficulties always retarded the growth of culture in all fields of activities. In this context there is an important factor to remember : a certain population can exist and also grow even in the absence of agriculture provided it has industrial potentiality of a surplus kind. In that case it can exchange agricultural produce in lieu of either the raw-material or the finished goods or both. But such a possibility does not appear to have existed in south Turkmenia which is comparatively very poor in mineral resources. The industrial produce was also limited. Therefore, it had to depend for its agricultural needs on its own resources.

We can, in the absence of field data, only guess that some kind of artificial irrigation system was in existence since the small swift streams of the Kopet Dag hills could not irrigate the land by sheer flooding its banks—none of them was a Nile or a river of the Indus System or a Tigris or an Euphrates. But one thing is certain: the streams discharged enough water for longer period of time in a year now than in the subsequent Periods, this is proved by the discovery of burnt pieces of trees like ash, poplar and *karagach* in the excavations, the trees which require sufficient water.

The crop cultivation included chickpea and small grapes, besides wheat and barley. Obviously, crop items increased when compared with the items of the earlier period. But we do not have any idea about the plough : may be, they were very simple and made of wood. From the animal heads attached with the terracotta toy-carts it may be surmised that, by and large, they were camel drawn, although a few representations of the horse (or onager) have also been found at the head of the toy-carts.

Stock-breeding forms part and parcel of the agricultural economy. Unfortunately, not much information is available on this aspect. The limited study of animal bones shows that sheep and goats were the main domesticated animals. As indicated earlier, sheep and goats started getting preference over cattle and pigs from the Early Bronze Age itself.

## METALLURGY

Namazga V is characterized by bronze artefacts whose composition included copper, lead and arsenic; in some examples even brass (an alloy of zinc and copper) was used. Precious metals like gold and silver were also used but only for making trunion celt, ornaments and seals (Fig. 3.13).

Metal objects have been found in hoards. One of the hoards contained a variety of objects, such as mirrors and rings as well as spears and razors, and a gouge. Sporadic discoveries include knives, spear-heads, adzes, daggers and awls. It is significant to know that some of the tools were made by double moulds. Also, some of the tools were completely flat, without any mid-rib, a feature which is comparable with some of the Harappan examples (Plate XI). At Altin-Depe was found an adze type long celt with trunions, made of silver, like of which there is only one example (of bronze) in the eastern regions, from Shalozan in the Kurrum area of Baluchistan (Lal 1951). But, possibly, a bronze axe-adze with

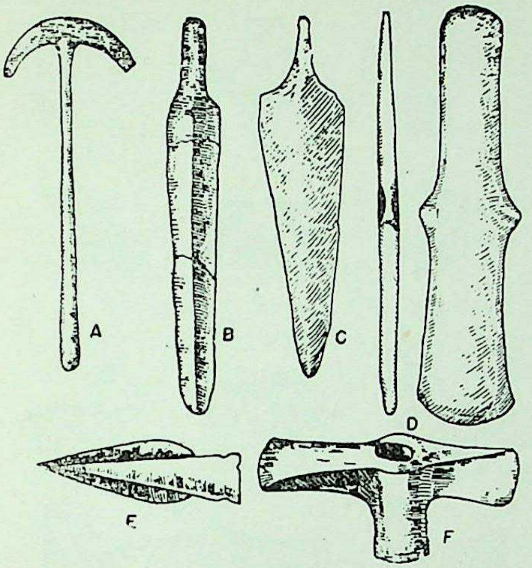


**Fig.3.13. Metal objects from different south Turkmenian Bronze Age sites. Except for D, which is of silver, all are of bronze**

**A, from Altin-Depe**
**B, from Anau**
**C, from Ashkhabad**
**D, from Daina**

tubular shaft-hole from Daina (Masson and Sarianidi 1972, 122) located in the north-western hills of the Kopet Dag, is much more important since a similar object has been found in the latest levels of Mohenjodaro (Wheeler 1953, 55). (Plate XII)

The bronze metallurgy had reached a high degree of excellence. It is proved by the discovery of not only bronze tools and weapons but also pots and pans, such as small globular vessels and flat-handled frying-pans in types which occur in the Harappan complex also (Fig. 3.14).

The same excellence is reflected in making a large variety of ornaments and objects of toilet; again, a situation comparable with the Harappan. Rings, bracelets and pendants were made along with round mirrors (handleless and slightly concave) and long pins with a large variety of decorative heads, such as those depicting double spiral, cross or rectangle with stepped sides, rosette, sickle, spear and goat. It must, however, be admitted that in variety, the Central Asian pins were far ahead in workmanship than the Indian types; infact, some of the attractive decorative motifs that they used were borrowed from the designs painted on earthen pots in the earlier periods, such as multi-stepped crosses.

The Central Asian matallurgy expresses at its best in making pendant seals, a large number of them employing a variety of beautiful decorative motifs, geometrical, floral and faunal.

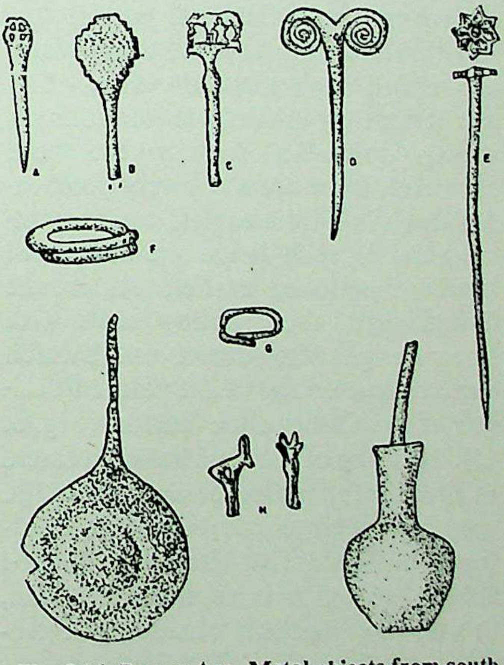


**Fig. 3.14. Bronze Age Metal objects from south Turkmenian sites:**

**A, from Yangikala Cemetery**
**B, H,I,J from Altin-Depe**
**C, from Khaaka Hoard,**
**D, from Kizil Arvat**
**E, from Ashkhabad Cemetery**
**F,G from Auchin-Depe**

The excavators recovered them mostly from the graves where they were very well preserved and it is a rare feast, to our eyes to see the fantastic range of these works of superb art and craft. But these are not to be confused with the Indus or Mesopotamian seals which were carved in intaglio and used as stamps of ownership, etc., and are generally found in the industrial and administrative sectors of the town. The bronze and silver seals with a small lug at the back for suspension have often been found located 'near the pelvic bones which may indicate that they were worn on a belt' (Masson and Sarianidi 1972, 122). In form, most of them were cruciform, although square and round varieties are also there in sufficient numbers. Of these, possibly the most interesting ones are those which are called 'zoomorphic' since they are completely in the form of animals, mostly domestic, such as the bull. However, there are a few very good examples of heraldic eagles, and mythical animals, such as the one with three heads, mentioned earlier. As in the case of pins, these hollow seals with linear designs often depict motifs which were characteristic of the painted designs of the Chalcolithic period (Fig. 3. 15). Nothing of the kind has been found in the Harappan settlements, although they have a large number of counterparts in Seistan, at sites like Shahr-i Sokhta, as well as in south-eastern Iran, at sites like Saidichi (Lamberg-Karlovsky and Tosi 1973, 21-58) and southern Afghanistan, at sites like Mundigak and Deh Morasi Ghundai, both located near Kandahar.

Incidentally, it may be mentioned that the seals in Namazga V times were made for stamping goods also, and they have been found made of as diverse materials as clay and turtle shell, not to speak of stone. The copper-bronze pendant-seals could be used also as stamps, but whether they were used widely for that purpose is not known.

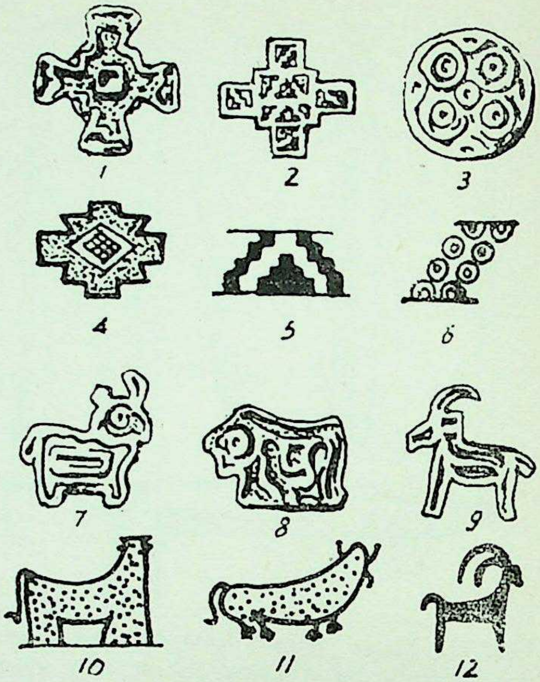


**Fig. 3.15.** **Altin-Depe : Metallic Seals after the motifs painted on pots. Namazga V**
**1—3 Seals, 4 to 6 painted motifs**
**7—9 Seals, 10 to 12 painted motifs**

### Social Structure

It is not always easy to interpret the archaeological findings in the framework of social infra-structure. Only certain guesses could be made, sometime the range of probability may exceed sixty percent while at others it may remain at fifty percent or come down to thirty percent, keeping intact considerable scope for discussion and also highly personal opinions. But one thing is certain, the civilizing process in itself depends on specialization of jobs, at least in the field of technology. This is clearly reflected in the clustering of industrial quarters in cities, both big and small. Both at Altin-Depe and Namazga-Depe this feature is very well preserved.

There is one more factor closely related to it. The factor of governance. No society can ever hope to grow in material culture unless the specialists are free from the arduous jobs of agriculture and hunting to earn their bread. Some one has to ensure them of the constant supply of food-items in exchange of their expertise. The one on whose shoulders falls the main responsibility of this job hardly does it alone, some kind of administrative machinery is created. And this may all get reflected in the structures and antiquites since the members of this machinery always enjoy some privileges. The same applies to the practitioners of magico-religious rituals. Both at Altin-Depe and Namazga-Depe we have definite evidence for it.

But such an inter-relationship between archaeological antiquities and social structure always admit several variations, and herein lies the scope for discussion and the need for finding out new tools of archaeological research.

With this much of preface, we turn to the social organization of the Middle Bronze Age south Turkmenia. What was the social unit which together with other units formed the society at Namazga-Depe or Altin-Depe? It was certainly larger than the nuclear family as can be made out from the presence of multi-chambered houses, and the collective burials, in one example, as mentioned earlier, containing as many as fourteen skeletons. Did it belong to a clan or to a joint family of two to three generations? ... Then, did all the members enjoy equal rights? ... At least two persons buried in this collective burial at Altin-Depe bore seals at their waist. May be, they were the elders of the clan.

Further, what was the role of the trading class in the social set-up? There was certainly the concept of private property based on personal earnings, as is clear from the discoveries of two hoards of metal objects, ivories, etc., at Altin-Depe.

The right to personal property is evidenced also from a clay figurine bearing a mark on its body which is typical of seals. It may only be a reflection of the practice in vogue; in many Indian villages bulls, cows, horses and the like are stamped with heated metallic seals of the owners when the animals are still young. But we have no idea how the working of the the traders was regulated, *i.e.*, what patronage was given to them and what taxes were levied on their earnings. That without such regulations no long-distance trade was possible is absolutely clear from all other contemporary civilizations (Asthana 1978).

A problem somewhat similar to it must have existed in the sphere of State-Artisan relationship also. It exists even today. The artisans form distinct working groups in the society. They had their own residential and workshop quarters. The potters, the metal-smiths, the stone carvers, each one may have formed a social class based on vocationalism. But what status they enjoyed in the pyramidal structure of the urban society is not clear to us since their residential quarters were hardly different from those of the rest. Still, they do not seem to have enjoyed a very high status since their material prosperity was much less when compared with those of the people living in the eastern sector of the town, it is evidenced from the antiquities recovered from the houses as well as the graves, belonging to the people of these different sectors.

*The Priesthood:* Possibly, at the apex of the social order stood those who maintained the ziggurat at Altin-Depe. The sheer massiveness of its construction, using some half-a-million mudbricks, is enough to visualize a social situation in which the highest attention was paid to religious edifices and the priesthood. He (or they) had his own ware-house near the temple and, possibly, also in the residential quarters. Under the shadow of the temple laid the whole settlement. But did he enjoy the temporal power also? We have no means to ascertain it. Amongst the Aryans, the Brahmanas enjoyed the highest social status but no temporal power, it was wielded by the Kshatriyas. But in this context, it may be pointed out that except for the ziggurat no other monument at Altin-Depe could be termed 'monumental', and the 'seat of the temporal power'. What we call the 'sector of the elite' may at best be the region patronized by the administrative staff and the trading community. No single house is called 'ruler's house'.

That the society appears to have been priest-ridden is clear from the details of the so-called 'grave of the priestess' found at Altin-Depe. It is significant to note that the priestess heldtwo mother-goddess figurines in herhands.

The Namazga V people seem to have attached a very special significance to the concept of mother goddess (Plate XIII and XIV) because of one factor which is rarely available elsewhere. They bear on their shoulders, breasts and backs nearly a dozen basic symbols incised with great care (Fig. 3.16). Some of these symbols have similarity of one kind or the other with the pictographic symbols existing in Harappan, Sumerian and Proto-Elamite groups. Unfortunately, this symbolism could never grow into a script. Still, it cannot be denied that even as it is the significance of symbols seems to have been directly related with religion. And to that extent, the group wielding power and prestige in the field of religion appears to have also controlled the reigns of the administration. Are we then dealing here with the system of priest-kings?

*Artisans and Labourers*: And finally, the atrisans and the labourers who built the houses, the ware-house and the fine structural materials, such as the mudbricks. They possibly formed the lowest rank in the total heirarchy. Where did they live and how did they live are not known to us. If West Asia was even the rough model for the social status of these people, we can only suggest that they lived in temporary hutments somewhere away from the centre of the town; where exactly, is not known to us.

## SOUTH TURKMENIA AND THE INDIAN BORDERLANDS

The urbanism of Central Asia was not an isolated phenomenon. It maintained a net-work of connections, both direct and indirect, with the contemporary civilizations of the Orient (Fig. M. 3.3). The area of culture-interac-

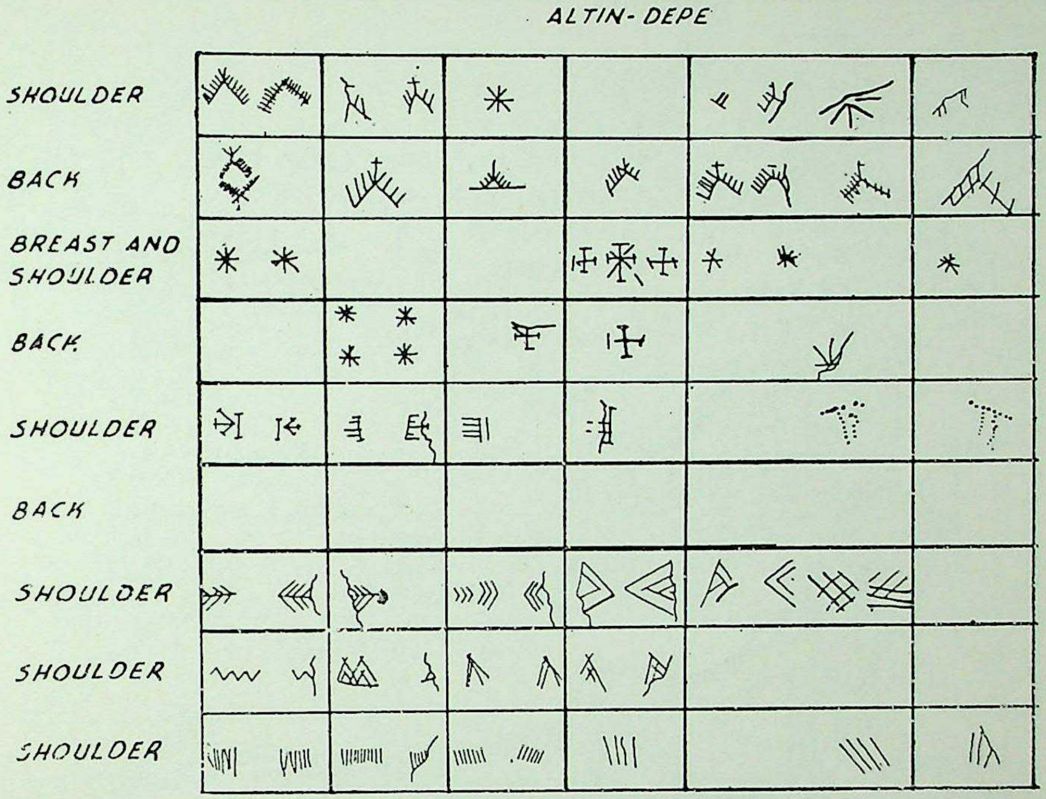


**Fig. 3.16. Incised marks on Terracotta figurines, Namazga V.** *After Masson*

tion was very wide: on the one hand, it is likely to have shared some of the items of the cultural milieu of north-western Iran and Siestan, and on the other those of Afghanistan, Baluchistan and the Indus System (Shchetenko 1968). For the present study, Indus-Turkmenia interaction is decidedly the most significant one since in the east of Turkmenia Indus Culture alone reached the city stage (Fig. 3.17). But then how was it made possible? Did it possess enough of cultural potentiality as well as man-power and administrative accumen to maintain such a wide-spread relationship? What was the mechanism of trade? What items have only conceptual similarity? What items bear only close resemblance, and, therefore, could only be local imitations? How far the relationship was due to the actual migration of people? The questions of these kinds may be multiplied since all of them are the leading ones, and on their correct answers depend the making of the correct model for a proper understanding of Central Asia's relationship with other regions.

IVORIES

One of the most important items which goes a long way to establish trade contacts with the Indus Civilization is ivory. It is significant to note that elephant was never represented in any form in south Turkmenia and osteological studies also show complete absence of this material. Obviously,

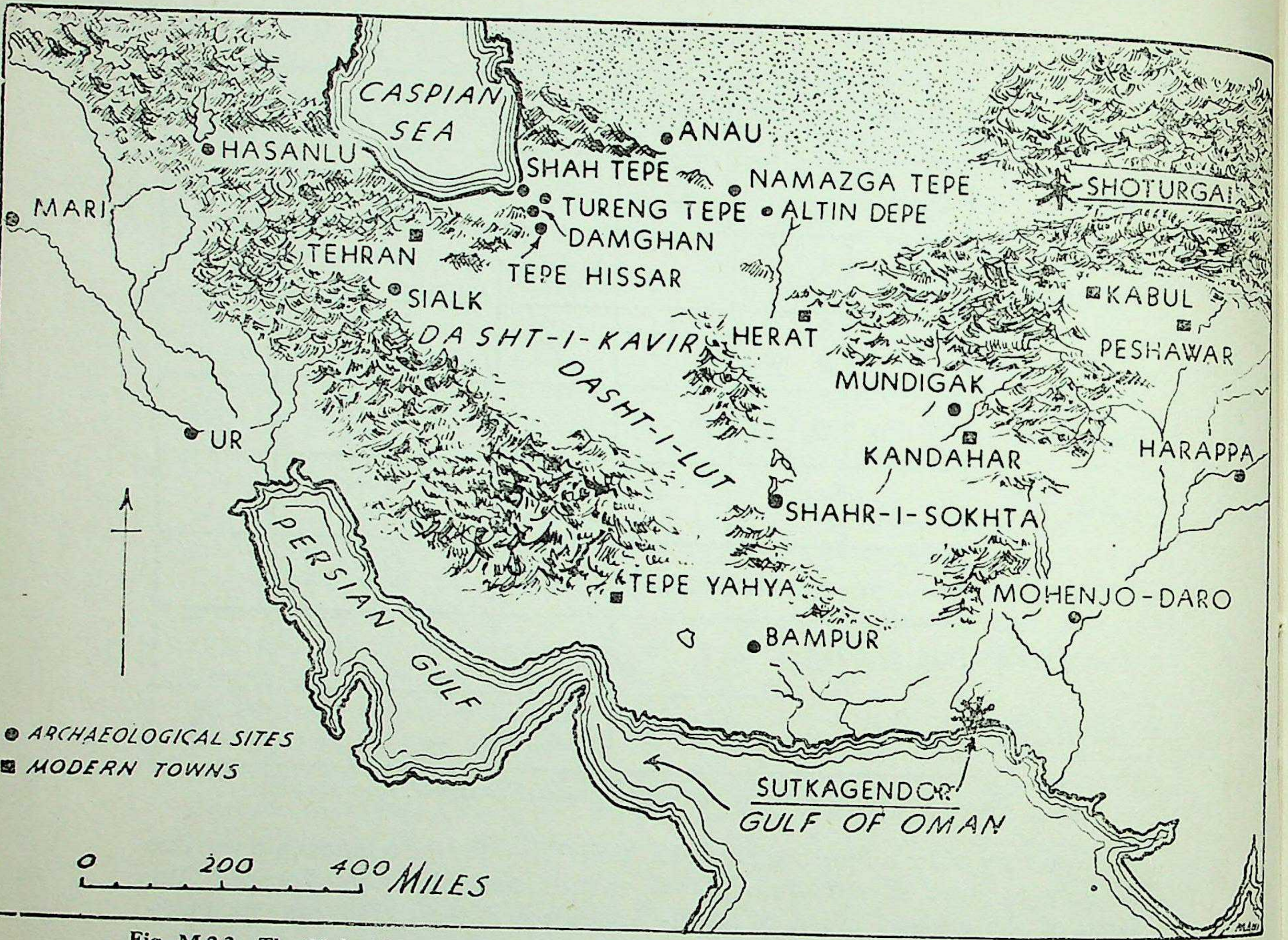

CASPIAN SEA
ANAU
HASANLU
SHAH TEPE
NAMAZGA TEPE
SHOTURGAI
MARI
TURENG TEPE
ALTIN DEPE
DAMGHAN
TEHRAN
TEPE HISSAR
SIALK
KABUL
DASHT-I-KAVIR
HERAT
PESHAWAR
DASHT-I-LUT
MUNDIGAK
UR
KANDAHAR
HARAPPA
SHAHR-I-SOKHTA
PERSIAN GULF
TEPE YAHYA
MOHENJO-DARO
BAMPUR
ARCHAEOLOGICAL SITES
MODERN TOWNS
SUTKAGENDOR
GULF OF OMAN
0
200
400 MILES

Fig. M.3.3. The third millennium important sites between Mesopotamia and the Indus. *After Karl & Tosi*

all objects made of ivory must have been the items of import, or at least the raw material was imported. At Altin-Depe, as mentioned earlier, two hoards of antiquities were found and both of them contained ivories. They include a number of square dices with concentric circles in the centre and cross hatching with parallel oblique lines at the four corners. Along with them oval and round dices with concentric circles along the margin have also been found. But probably much more significant objects of ivory are those small sticks with rectangular section which bear different numbers of markings on four different faces because they are closer to the Harappan dice (Fig. 3.17,8-13). It may, however, be clearly stated that none of the ivory objects is identical with the ivory objects found at the Harappan sites. Yet, as stated above, the source for south Turkmenian ivory in the third millennium B.C. may not have been any place other than the Harappan cities. Then, how to resolve this knotty problem? May be, the parti-

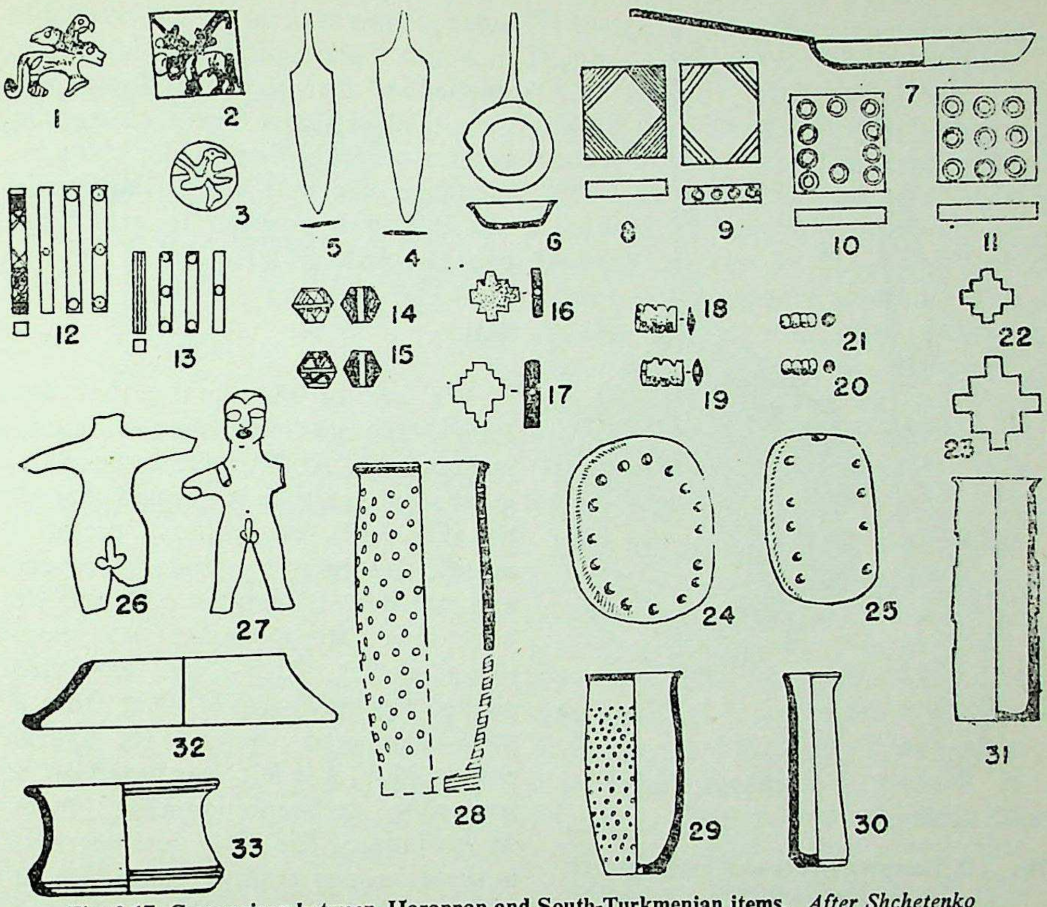


**Fig. 3.17. Comparison between Harappan and South-Turkmenian items.** *After Shchetenko*
**1, 4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 28, 32 from Altin; 22 Khapuz; 26, 30 Namazga; 2, 3, 5, 7, 11, 13, 17, 19, 21, 23, 27, 29 Mohenjodaro; 25 Chanhudaro; 9, 31, 33 Harappa**

cular ivory objects were made to order at Mohenjodaro or Harappa. Unfortunately, in Turkmenia objects of these descriptions have not been found in any other material to firmly establish the view that gaming objects of this category were ordered by the elite of Altin-Depe. We, therefore, can not go farther than this with the hope that soon more evidence would be coming forth to enlighten us on this issue.

## COPPER OBJECTS

Similarity in artefactual types may be extended to the copper objects also. Concave sickles, chisels with rectangular section, leaf shaped spearheads without mid-rib (Fig. 3.18), chopper-knives with concave back and convex cutting edge, etc., (Pumpelly 1908) have been found at the Namazga and the Indus sites. So also the frying pans with long flat handles (Fig. 3.18). A high necked flask with a rod has also been found at Altin-Depe. Each of these types has its counterpart at the Harappan sites. But are they so very specific that there could be no other source for them? There could be. But one thing is there : they do not have any local ancestry and they are almost single examples. One may interpret it either way : these could as

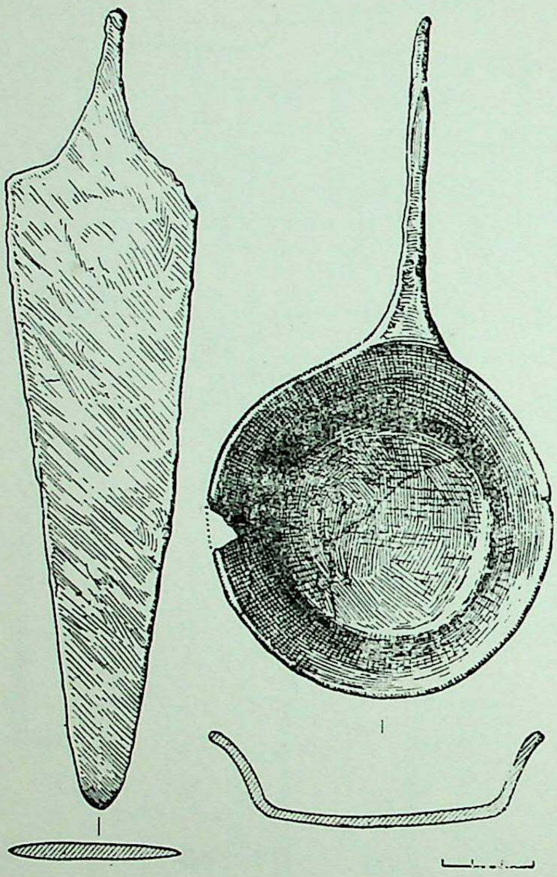


**Fig. 3.18. Harappan type bronze frying-pan and flat celt from Altin-Depe (Namazga V)**

well be imports in the Indus Valley from south Turkmenia. But all that we know of the two civilizations, we are more or less clear on the point that copper-bronze metallurgy amongst the Harappans had reached a level much higher than that ever existed in south Turkmenia. In itself it may not mean much, after all many objects were certainly made locally, such as the pins and the pendants with typical south Turkmenian motifs. But what applies to such objects may not apply to other objects which do not give any indication of local make. Therefore, the possibility that they were the imports in south Turkmenia cannot completely be ignored. One thing more, copper was no where available in south Turkmenia, it was imported, smelted and then given specific shapes. Copper objects have been restricted in number at all the sites. The chances, therefore, are that south Turkmenia was not in a position to export the copper objects.

SEALS

We are of the opinion that the Indus-Namazga contacts are evidenced by seals also. At Altin-Depe a rectangular stone seal with Harappan characters (Fig. 3.19), but without pictorial motifs, has been a unique discovery and matches with similar evidence we have from Mesopotamia. As mentioned earlier, Altin-Depe has also yielded a pendant-seal of silver from a brick-chambered burial. Its figural composition, it is felt, was based on a soapstone seal-representation from Mohenjodaro. The Altin seal portrays a three headed griffin—the body is of the tiger but the mouth is of some bird. The legs are solid but hatched with linear patterns (Fig. 3.20). The Mohenjodaro seal depicts a three

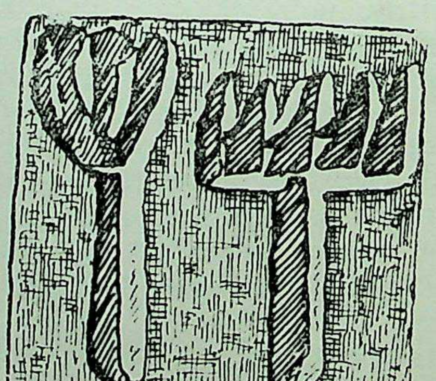


**Fig. 3.19. Harappan Seal from Altin-Depe**

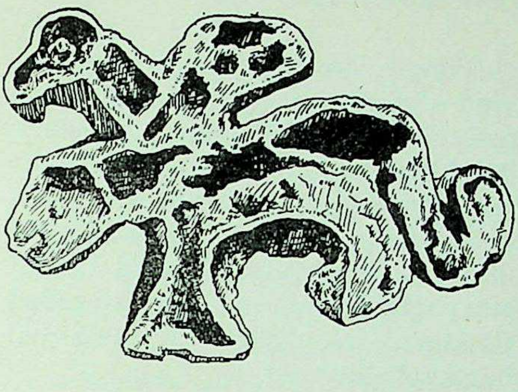


**Fig. 3.20. A silver seal (Namazga V) from a grave at Altin-Depe. The seal is hollow with raised outlines. It depicts three heads of three different animals emerging out of a single body**

headed animal-complex : the lowest of the three heads is that of a bison, second of a unicorn and the third of an ibex. The comparison is, therefore, somewhat weak. The only point of similarity, if there is any, lies on the conceptual plane—the concept of a mythical animal with three heads. As said earlier, functionally and formally the two examples are entirely different and, therefore, we hopefully look forward for a few more examples of this category. We have as yet not come across even a single example of the Namazga seal-pendant type anywhere in the Indus Culture. As will be shown shortly, it had a slightly different distributional area. Still, the conceptual similarity is there and must mean something definite.

POTTERY

And then the pottery. Shchetenko (1968) has compared the Namazga V pottery types with the Harappa Cemetery R types. Of the 45 Harappan types, it has been demonstrated, at least 13 have close similarity with the Namazga types : Harappan types I, IX, X, XI, XXI, XXIV-XXVII, XXX, XXXIII, XLI and XLV, as published by Wheeler (1947). In this context some of the Harappan fossil types may specifically be mentioned since some of them have been found in south Turkmenia. They are perforated cylindrical jars, jar-stands with concave, vertical and slant profiles, small oval jars with two perforated lugs opposite each other on the shoulder, and slender cylindrical vase with flat base and flared rim (Fig. 3.17).

The analysis of pottery is extremely interesting, and, perhaps, significant as far as Harappa-Namazga relationship is concerned. But there is a hunch. How it is then that the Harappan pot-paintings are totally absent on the Namazga pots? It may be recalled that Namazga V is comletely devoid of paintings. In case Mundigak was the intermediary station (the assumption is based on the occurrence of the Harappan pipal leaf design on the Mundigak IV pottery) or Shoturgai, on the Oxus, was the intermediary station (pipal leaf motif is found here also, unconfirmed news) then why do we not get the pipal leaf design in south Turkmenia ? The fact of the matter is that this change, from highly painted pottery tradition to absolutely plain pottery tradition in south Turkmenia, is itself very enigmatic. We have our own doubts in the attempted comparison, but, it can not be rejected since forms of pots and pans matter much more. The reason is not far to seek : the Harappan pottery certainly comes under the broad category of painted pottery but let it be clearly understood that the percentage of painted pottery in the whole collection of any particular site is very small, not more than 10% to 20%, we guess.

### BEADS

And then the beads. At Anau, Altin-Depe and other sites a large number of them, made of faience, paste, carnelian, agate, gold and lapis lazuli have been found. Some of these are compared with those from the Harappan sites, *e.g.*, the segmented type, the denticulate type and the multi-stepped cross type (Fig. 3.17). There is, however, an inherent danger in this comparison. Some of the types have been equally well known in Mesopotamia and Iran, *e.g.*, the segmented bead (Wheeler 1953, 73-76). Now how to be sure that Central Asia received them from the Indus Valley and not from West Asia? Incidently, this difficulty exists even when we cosnsider the case of copper pins with double-spiraled heads existing both in the Indus sites and West Asia (Piggott 1948). Unfortunately, so far no etched carnelian bead has not been found anywhere in Central Asia, that is a type which went from the Indus even to Mesopotamia. As far as the multi-stepped cross type beads and inlay pieces are concerned, it is possible that the Indus got the idea from Central Asia or an intermediate site, like Gumla (Fig. 3.17). The reason for this is not far to seek. This particular motif, including the stepped pyramid, which is only half of the former, was never a popular motif in India, the Indus painted designs do not include it. It was also not popular in south Iran although a couple of examples have been found at Bampur and Shahdad.

### TERRACOTTA FIGURINES

Finally, a word about a particular kind of terracotta figurines—the nude male figurines in ethyphallic posture. At Altin-Depe there are a number of examples (Fig. 3.21) but in the Indus context they are rare (Fig. 3.17)—the nude male repeatedly found is not ethyphallic. However, the so-called Pashupati seal depicts the male god in ethyphallic pose.

## BRONZE AGE CULTURES BEYOND SOUTH TURKMENIA

The overall picture of the Harappa-Namazga contacts that emerges from this study is encouraging since there are some pieces of evidence which cannot be brushed aside. As it appears at the moment, the direct contacts may have been rather limited but indirect contacts were impressive. The indirect contacts were possibly maintained through sites like Mundigak where the similarity really extends to metal seals as well as to seals made of stone and terracotta with typical incised decorations. However, the seven settlements of the Harappans at Shoturgai on the Oxus appears to have played a bigger role in Harappa-Namazga interaction.

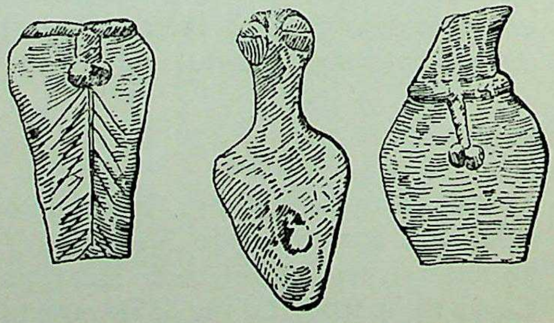


**Fig. 3.21. Altin-Depe ethiphallic male figurines, Namazga V**

## South-East Complexes

As was natural, due to geographical proximity, Central Asia seems to have maintained direct contacts with north-western Iran. An example may be quoted. The Altin-Depe hoards contained a grey ware pot which is identical with a pot from Hissar (Masson and Sarianidi 1972, 128). Now, as we know, in Namazga V Complex grey ware just does not exist. Obviously, it must have been an import in south Turkmenia.

We have already mentioned the case of Siestan-Namazga relationship on the basis of identical pendant-seals, pottery, etc., found in the two regions. In fact, archaeologically speaking, Siestan has given a large number of antiquities which are quite similar to those found in the Namazga V repertoire and, to that extent, we can visualize direct contacts between the two regions.

The culture-interaction zone, therefore, extends from Central Asia up to the Indus Valley covering north-eastern Iran, southern Afghanistan, Siestan and northern Baluchistan. Southern Iran was a peripheral region. It had two rings—the inner ring of intimate contacts covering north-eastern Iran, Siestan and southern Afghanistan, and the outer ring, covering the Indus System, south Iran and Mesopotamia with which the contacts were, in all probability, largely indirect through inner circle sites which may have played the role of transit stations.

We might give a caution which is absolutely essential. The trade between Central Asia and other countries is likely to have contained a large number of items of the perishable kind also (which largely remains invisiable to archaeologists), as it has been till recently: raw wool, raw fur, raw skin, hard wood, textiles, crops, cattle, sheep, goats, and the like (Chakrabarti 1977). Since the system of exchange was barter, we cannot hope to get anything in our archaeological digs which can establish or deny the existence of trade in such perishable items. But if the Cuneiform tablets from Mesopotamia have any indirect bearing on the nature of the trade amongst the countries of the Orient, then we may quote them—they clearly mention the import of similar items from Meluhha, Makan and Dilmun, located along the south-eastern seas; the former being sometimes identified with the Indus delta (Asthana 1978). Archaeology is, therefore, a very poor guide as far as the attempts to reconstruct the trade relationship between Central Asia and her eastern neighbours are concerned. A few gems, a few seals, a few pots, a few ivories, and the like that we get in the excavations certainly formed only a fraction of the total amount of trade. (Asthana 1978 a)

## North-East Complexes

### ZAMAN BABA

The culture-interaction of the Middle Bronze Age south Turkmenia also took place with some of the contemporary back-water village cultures of the Bronze Age existing in inner Central Asia. It was mainly aimed at procuring raw materials, like tin and turquoise from inner Central Asian regions which start gaining strength in demand from Namazga IV times itself since it is concomitant with the phenomenon of urban industrialization. At Zaman

Baba we have some Namazga IV sherds. One of these cultures of really productive economy which could help south Turkmenia was Zaman-Baba culture. It was discovered by Y.G. Gulyamov *et el* (1966) in the lower Zeravshan Valley, in the western part of Kyzyl-Kum desert at a site located in the vicinity of the village called Zaman Baba. Obviously, it is the course of the Zeravshan which must have provided the natural route through which south Turkmenia was connected with the upper and lower reaches of the Amu Darya. The same route must have connected south Turkmenia with the Fergana Valley as well as the Samarkand Oasis. The route has been slightly hazardous and, therefore, used only when there was a will to use it. The site of Zaman Baba has, therefore, been very important. Here people lived in huts whose living-floors were dug a little below the ground level. These semi-subterranean dwellings were far different from the multi-chambered mud-brick houses of south Turkmenia. The dead, it may also be pointed out, were buried differently: in pits or stone chambers, sometimes singly, sometimes in pairs, but not collectively as such. The pottery was also a lot different (Fig. 3.22), not graceful and wheel-turned but crude and handmade, although decorated with incised and stamped designs, sometimes painted also. A rectangular box-like type is extremely characteristic. Stock-breeding was their main occupation as is evidenced from the discovery of a large number of bones of the domesticated animals, such as the goats, sheep, cows and asses; the bones of the wild animals accounted not more than 15% of the total. Pressure flaked leaf-shaped and lenticular type flint arrowheads were used for hunting. Agriculture, they certainly practised as the impressions of wheat and barley have been very often found in the body of the pottery. Serrated flint blades and a kind of stone mace-head also provide supporting evidence.

The Zaman-Baba culture heralds the early stage of what is called Steppe Bronze Age, spreading over a very large area in Uzbekistan and farther east. It was, however, a short-lived culture, ranging between 2200 B.C. and 1900 B.C.

The south Turkmenian elements in the Zaman-Baba culture are not many but the forms of the beads, such as multi-stepped crosses, bronze pins with thickened ends, and a flat terracotta figurine, and possibly, pottery kilns also, do suggest borrowal. But all of them were certainly not imported. They were made by the local metalsmiths out of the locally available copper ores as the nature of their impurities shows. They may be taken as local imitations of foreign types.

From Zaman-Baba we go a little more eastward, to Pendjikent, near Samarkand. Here a remarkable shaft-holed axe-adze was discovered. As noted earlier, it is exactly of the type as found at Daina in the western part of south Turkmenia. As said earlier, another example came from the latest levels of Mohenjodaro.

## Fergana Valley Complex

The north-eastward interaction of the south Turkmenian culture did not stop at Pendjikent. It entered into the eastern Syr Darya system. There may have been a strong reason for it, at

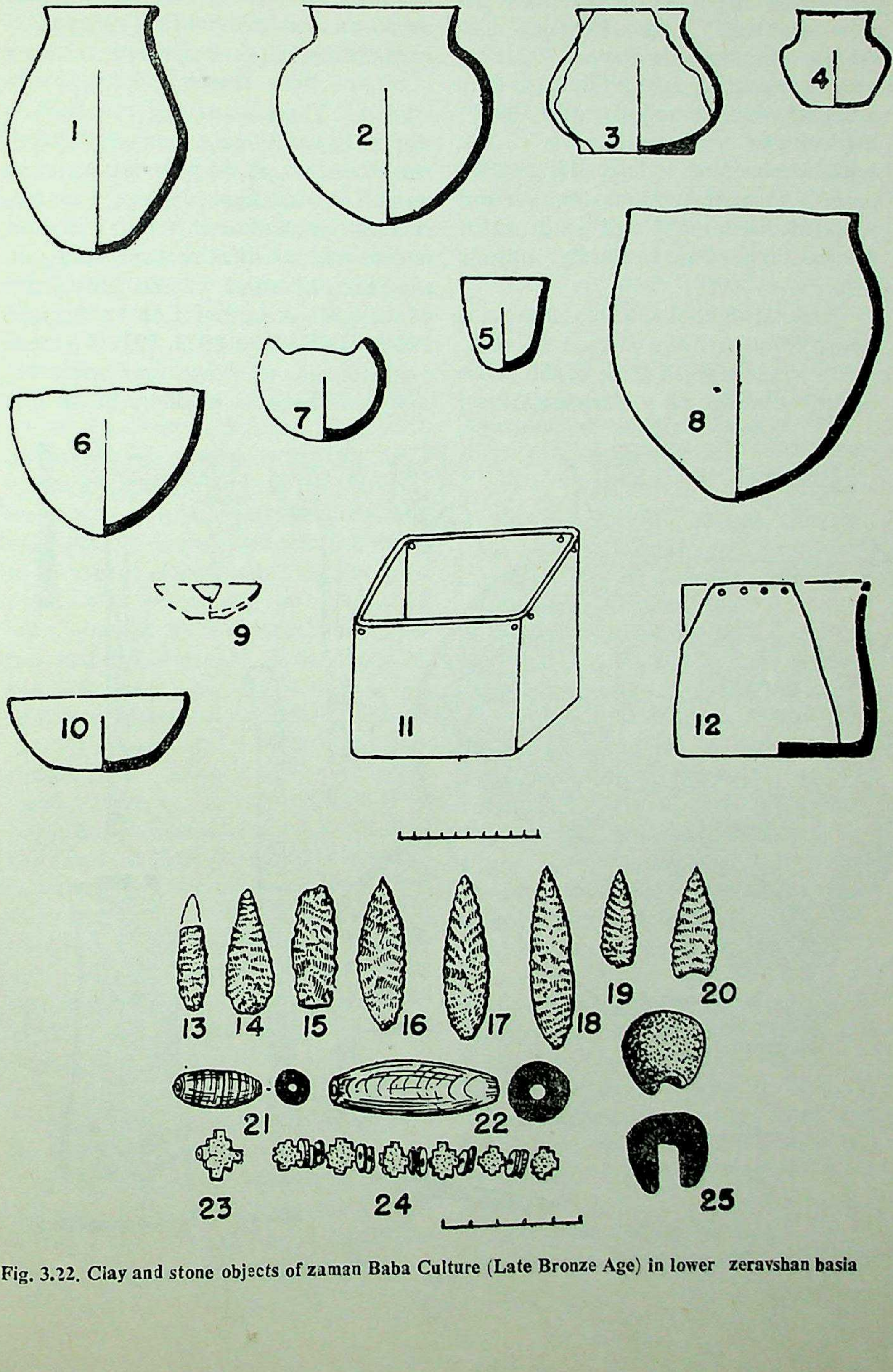

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Fig. 3.22. Clay and stone objects of zaman Baba Culture (Late Bronze Age) in lower zeravshan basia

least from the Turkmenian point of view—Bokhara and Fergana are known for their tin deposit which is used in preparing bronze. But it is only a hypothesis since majority of the south Turkmenian objects are not of tin based bronze, but of lead and arsenic based. However, more finds and more researches may yield evidence in favour of tin-based bronze objects also.

Here, at Khaaka, a very important hoard of objects was discovered (Fig. 3.23). It contained some of the most beautiful bronze pins. They are known for their tops, such as the those representing a cow being milked by a milkman sitting below the breasts, the cow itself has been shown licking fondly its calf. There is another pin with a double inwardly coiled spiralled head, the like of which we have from Anau as well as Mundigak. In fact, a closely related representation is that of a bird and/or animal, like the stag, found on the heads of some of the pins from Mohenjodaro, Lothal (late level) and Hissar IIIB (Rao 1973, 193). All these evidences go to show that whatever may have been the mechanism of dif-

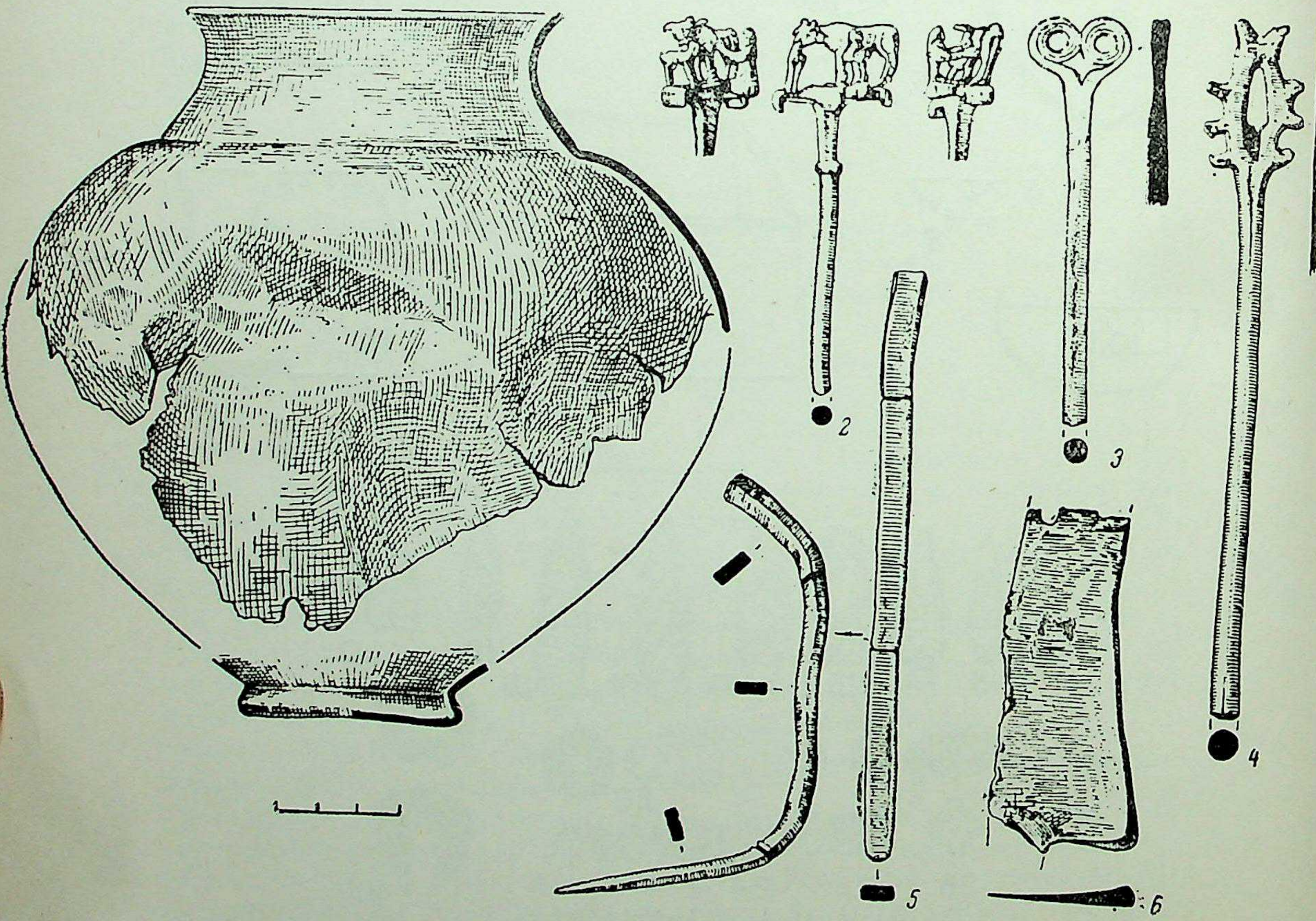


Fig. 3.23. Metal objects from Khaaka south, Turkmenia : Late Bronze Age

fusion of objects and ideas, the Middle Bronze Age of south Turkmenia covered a very wide area, both in its south-east and north-east.

Amongst the mysteries of the history of various cultures is also included the mystery which surrounds the end of the protohistoric urbanism around 1700-1600 B.C. both in Central Asia and India. It coincides with Sokhta IV, Hissar III C. Although various reasons are detailed, from desiccation of land due to climatic and hydrological reasons through the 'over concentration of population in cities' to the tribal invasions, because of sudden upheaval in northern Iran, yet no satisfactory answer seems to be forthcoming. Guesses override facts, for example, palaeogeographic research in southern Turkmenia shows that there was practically no change in 'climatic and natural conditions over the last 5000 years.' One thing is, however, clear : no violent destruction of the settlement at the end of Namazga V is evidenced at any site. The situation is similar to the Indus cities. And to that extent one pertinent observation may be made in both the cases: at their peak, there appears to have emerged a tendency to exploit indiscriminately the natural and human resources which led to a peculiar crisis in man-land-animal relationship. Khlopin (1972, 213), however, feels that the cause of decline should be sought in social sphere.

'Evidently the concentration of the population . . . became so dense that the self-government of those collectivities was no longer able to keep such a mass of people within the framework of the existent social organization. There arose conflict between the exceeding population and the forces of production. The only way to settle this conflict was to have recourse to segmentation, that is to the sub-division of the abnormally developed social organism into smaller and more simple units, which were then forced to change their dwelling places.' It is a peculiar theory since it means that the cultural decline was some kind of a social-contract; fragmentation was a way out of a critical social situation. This is, of course, a bad model to which we will return later. Archaeology, however, has its own limitations and they must be admitted (Piggott 1958).

## Late Bronze Age

The process of cultural development and habitational expansion that started in the Namazga IV upper levels culminated in Namazga V middle levels. But this cultural level could not be maintained for a long time; Namazga V later levels are marked by definite signs of decline in culture and decrease in the size of actual land-occupation. For example, certain sectors of the township of Altin-Depe had already been deserted and the area of occupation had shrunk considerably. And now Namazga-Depe shrank from 170 acres to 3·5 acres. The situation is somewhat comparable with the Harappan city of Lothal as well as Mohenjodaro. Namazga VI is, therefore, the logical outcome of the declining process that started in Namazga V times. Namazga VI starts with the appearance of grey ware and red-slipped ware and ends with the handmade painted pottery of Yaz-Depe I type.

Sometime during Namazga VI, or Late Bronze Age, the city of Altin-

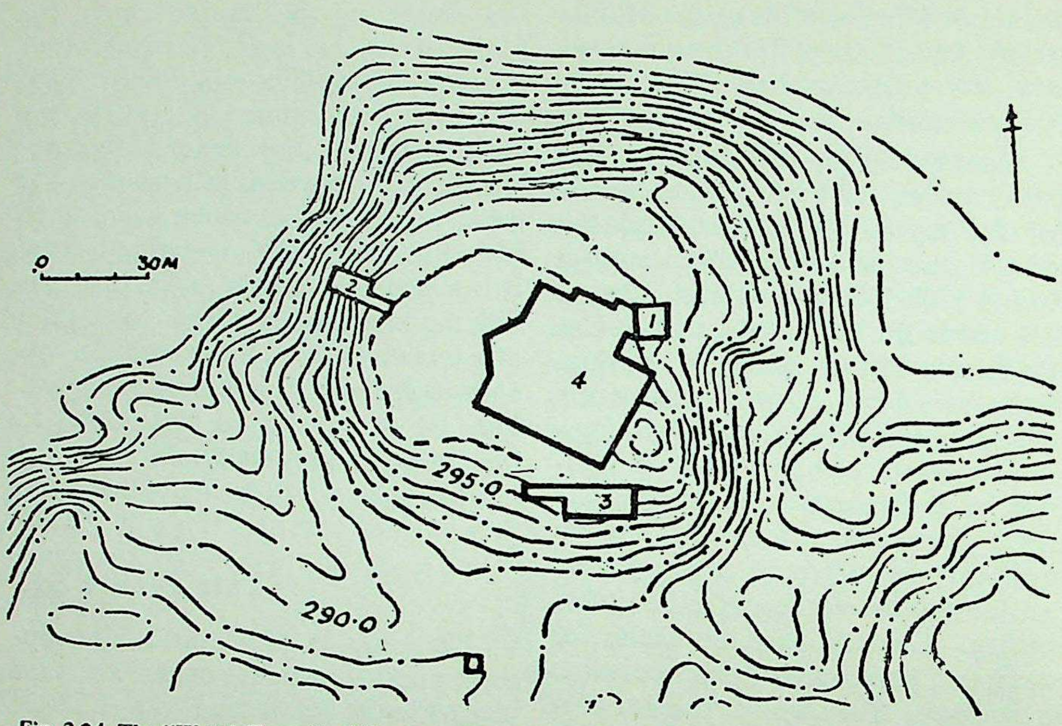


**Fig. 3.24.** The "Watch Tower" of Namazga-Depe: (1) Kuftin's Excavations (1952), (2) Marushchenko's (1956) (3) Ganjalin's Excavations (1964 ; 1967)

Depe was completely deserted, only at Namazga-Depe a small settlement on the northern edge of the township, of shorter duration (the thickness of deposit being only 4·5 m with five structural levels) existed. The last or upper-most structural level has been dated to 1030 ± 60 B.C. by $^{14}$C method. During this period of about 400 years (1600-1000 B.C.) the so-called 'Watch Tower' or 'Bastion Mound' of Namazga-Depe continued to cherish only the memories of the past; it had lost its pristine glory long back, although not completely (Fig. 3.24). While life on some of the older village-sites, such as the south mound of Anau, Elken-Depe (Gamialin 1956) and Tekkem-Depe (Kachuris 1966, also 1967) also remained intact, albeit showing very little of the earlier magnitude, some neglected areas came under colonization for the first time, such as the Murgab delta, slightly east of the Tejden delta of the Geoksyur Oasis.

## Submontane Sites

We may start with Namazga-Depe since here decline largely meant decline in the magnitude of the constituent items, the cultural traditions remained the same. The houses, found only on the Bastion Mound, located in the northern part of the town, continued to be multi-chambered with attached or central courtyards, and the residential blocks, but now only three of the several blocks remained in use. They were, however, still divided by streets, some 2·5 to 4 m wide. Of the three blocks, one belonged to the potters whose kilns continued to be built in two-tiered fashion with a complicated system of hot-air ducts.

Since Namazga-Depe alone has

yielded detailed information on Late Bronze Age, we will like to elaborate the above observations.

According to the Bihistun inscription of Darius I (6th century B.C.) and also the intinerary of Charax (1st century B.C.) south Turkmenia was divided into three geo-political regions with their own cultural characteristics and differentiated groups of people: the Parthians lived in the central part of the foothills of the Kopet Dag, around Namazga-Depe; the Hyrcanians lived west of the Parthians, in Meshed-Misrian plains, traversed by the Atrek and Gorgan rivers (the region is also known as Dahistan); and the Margianians lived in the Murgab river basin, including its delta. This has also been the division of Namazga VI or Late Bronze Age culture-area; in fact this has been the traditional division right from the times of the Late Chalcolithic culture-complex: Western, Central and Eastern, although in the Eastern zone the Tedjen basin was included and not the Murgab, which was colonized for the first time only in Namazga VI times. Thus at Namazga VI we are possibly dealing with the archaic Parthian culture-complex.

The Namazga VI levels were in fact caught by Pumpelly (1908) in his excavations on the southern mound at Anau, although he could not place the remains of these levels in proper perspective. Then, after about half-a-century, archaeological work in the Central zone was once again taken up, and a few other sites, such as Yangi-Kala, Tekken-Depe (Fig. M. 3.4) were excavated and their results published between 1956 and 1959: Ganjalin 1956 (a) and (b); Marushchenko (1959). Dur-

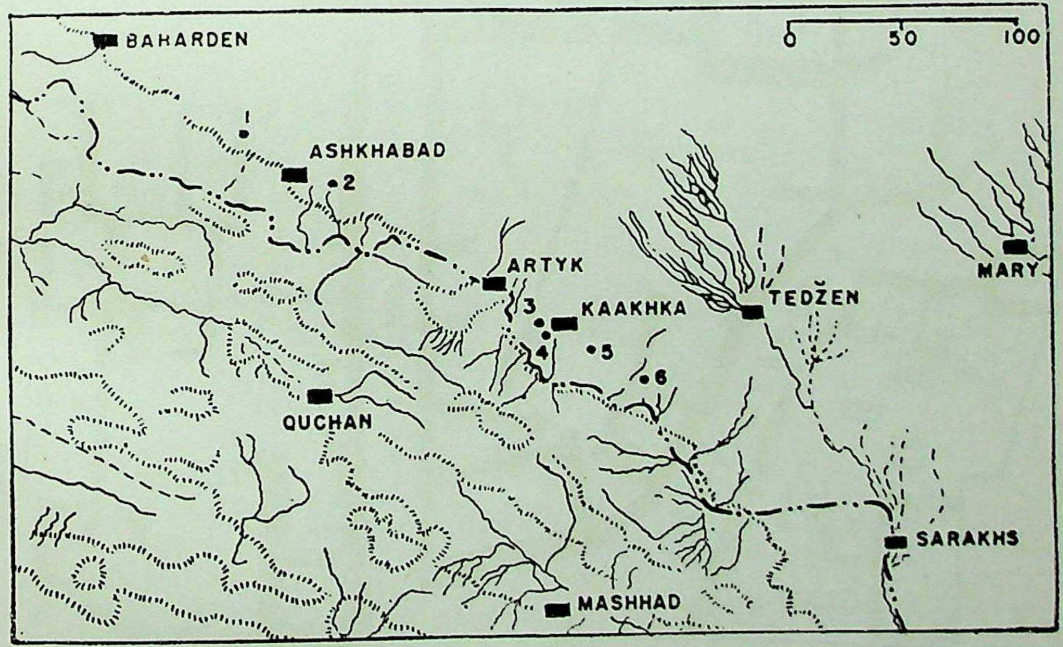


Fig. M.3.4. Namazga VI (Late Bronze Age sites)

1. Yangi-Kala
2. Anau
3. Namazga-Depe
4. Tekkem-Depe
5. Sermanch-Depe
6. Ulug-Depe

ing the fifties and sixties Namazga-Depe was excavated and its results were published by Kuftin (1952) and Khlopin (1965, 1967,1968). From these extremely laborious works we have now a fair idea of Late Bronze Age culture of the Central zone. Of course, Namazga-Depe's 'Watch Tower' area, as said earlier, gave us the richest material, and, therefore, demands from us special attention.

The tower, about 17 m high from the surrounding plains, spreads over 2,500 sq. m. of which 1,500 sq. m. has been excavated so far. Within the excavated area, two roads, about 2·5 m broad, have been found emerging from the main entrance located on the southern side of the tower-mound: one that goes straight towards the southern end is called 'Prospekt Kuftina' (Fig. 3.25) after the name of the excavator, and the second which goes towards the north-east, and is somewhat zig-zag, is

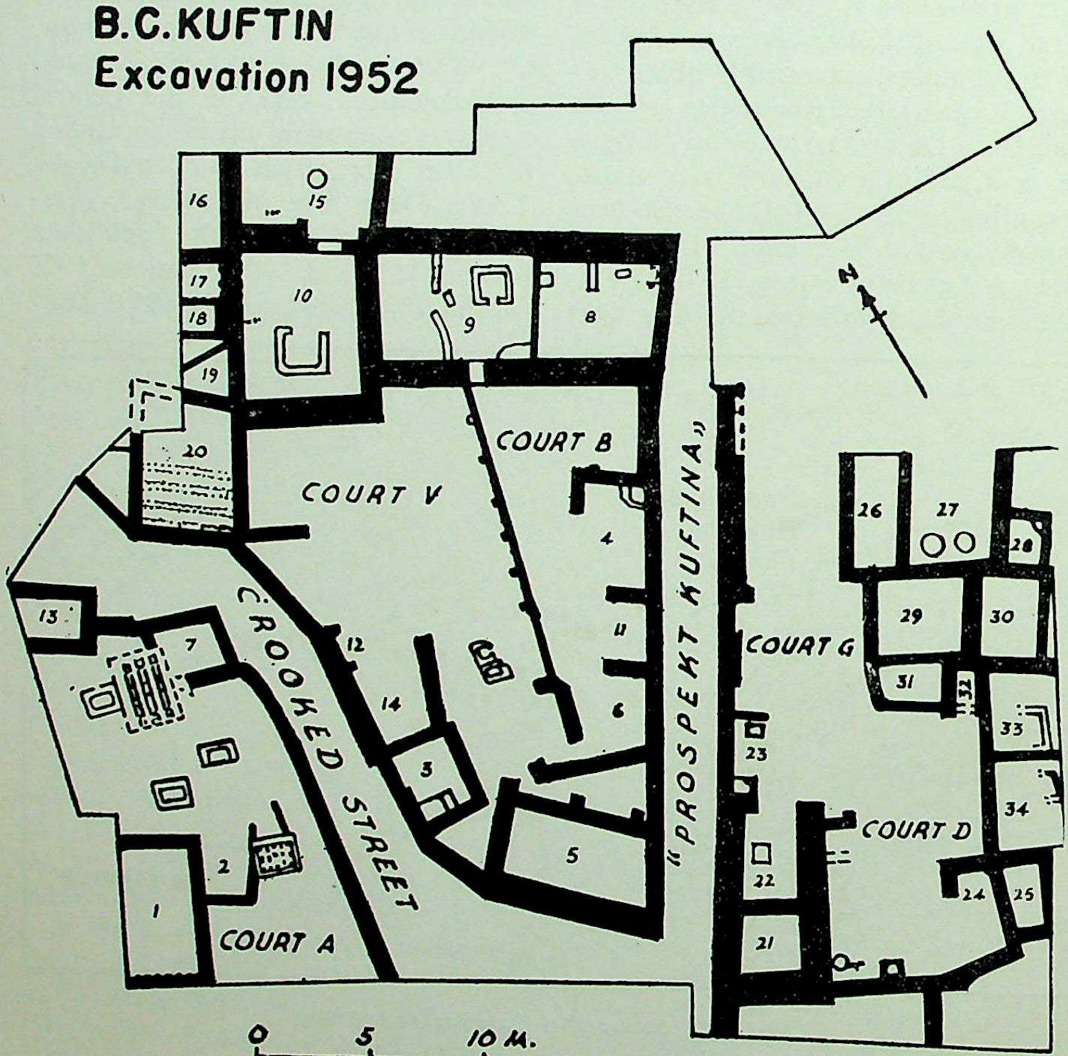

B.C.KUFTIN
Excavation 1952
N
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
COURT A
COURT B
COURT V
COURT G
COURT D
CROOKED STREET
"PROSPEKT KUFTINA"
0
5
10 M.

Fig. 3.25. Namazga-Depe. Planimetry of the excavated part of the "Watch-Tower" site. It belongs to Namazga VI times (Late Bronze Age)

called 'Crooked Street'. The two roads automatically divided the settlement in three blocks (there may be more of them still lying under the unexcavated part of the site).

The block between the two roads is a single large complex of domestic rooms and courtyards, all surrounded by an enclosure, without any opening on the present showing, which is, of course, partial. The walls and floors of the rooms were very well plastered. In a single room, one *tandoor* type vertical oven for preparing bread and one storage jar buried in the ground are the usual features. The big inner court-yard has yielded simple ovens built of bricks set on edge. Some small store-rooms also open into it.

On the other side of the Kuftina Road also we have a large multi-roomed complex opening in large courtyards with brick-built ovens. Within the rooms, the *tandoor* type ovens exist.

On the other side of the 'Crooked Street', we have the potters' industrial area. So far, three kilns of identical construction have been found, although one of them is of exceptional size, the area of the podium covering 10-12 sq. m. A very well preserved kiln (Fig. 3. 26) has a 'triangular opening' for the heat led to the deep fuel chamber, which is covered by a false brick vault; the bricks varied in size and were set at a certain angle, while special channels for conducting the heat were

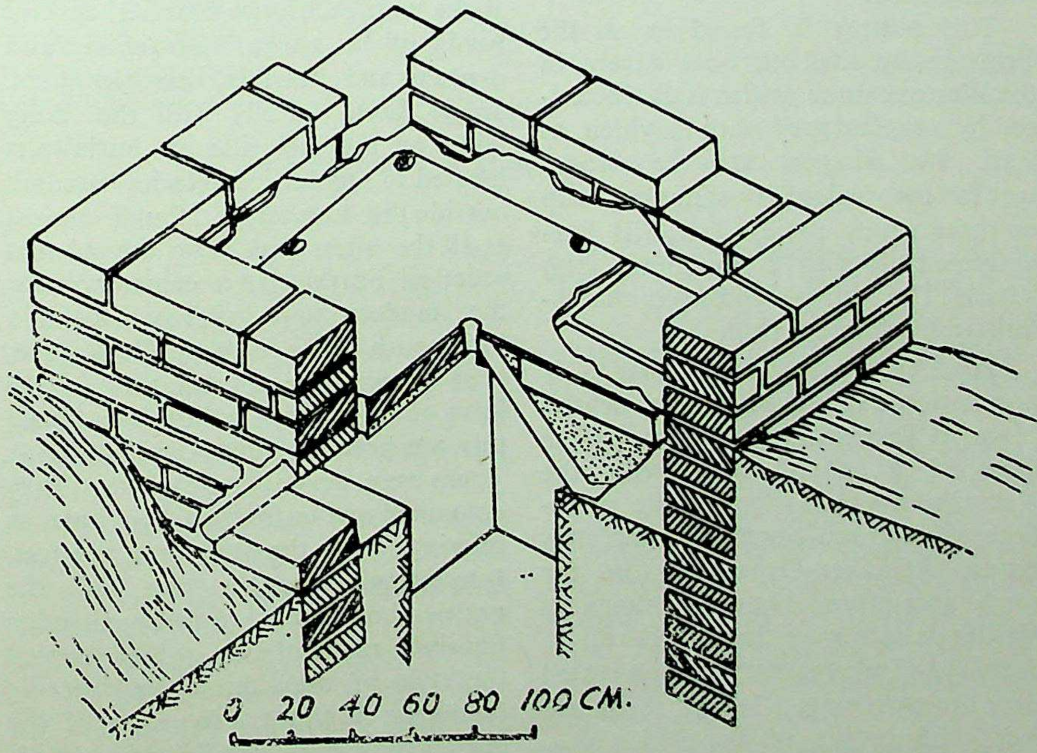


**Fig. 3.26. Namazga-Depe. Pottery kiln No. 1, isometric projection with section. Namazga VI (Late Bronze Age)**

placed between them. The heat passed through nine openings to the upper firing chamber, which has been preserved to a height of 40 cm. (Khlopin 1972, 205).

From the Watch Tower area we have a variety of red ware shapes along with 10% of Grey Ware pots, although in form they mostly belong to the same Grey Ware group. Bowls, bowls-on-stand, vases, jars, jar-stands, jars and basins on broad and high stands, basins with perforation at the bottom, tureen, are some of the table, kitchen and domestic types. Some of the pots bear incised decorations, including *swastika*, crosses, zigzags and rope desings, except for the kitchen and domestic pots of thick walls and big size, the pottery was wheel-turned.

This pottery is found in all the Central zone sites but only rarely in the Western zone which is characterized by a typical grey ware in which at least two shapes are the fossil tyes for the region: (i) spherical cup on three small conical feet, (ii) flat-bottomed cup with a horizontal loop handle. The Murgab pottery is characteristically different from it.

Possibly, a part of the Namazga V population had moved into a nearby place, at Tekkem-Depe, where people lived in a small village with the Namazgian way of life for quite sometime, till their settlement got completely burnt. At Elken-Depe also, in the same submontane region, remains of similar culture were found. In all of them red-slipped pottery predominated over the grey ware, a few of them are seen with marks of burnishing also. They were decorated with incised designs, one of which includes swastika.

## Murgab Delta Sites

But, probably the area which represents the Namazga VI complex better than Namazga and other submontane sites is the Murgab Delta, some 43 km. long oasis north of the Novya Kishman wells (Fig. M. 3.5). In all, there were six villages, of 2 to 5 acres in area, located along the old channel of the river (Mandel'shtam 1968). The oldest of these settlements was Auchin-Depe, a village yielding the remains of a few houses, pottery-kilns of double tier-type, and some movable antiquities over a deposit of only 1·5 m thickness. Here, one of the burials, now of single enterments, yielded an extremely rich group of offerings : a stone pendant-seal with snake motif, a bronze bracelet, several beads of a zurite, turquoise and gypsum and fourteen earthen pots. Single flexed burials with the body lying on the left side in burial-pits located in regular cemeteries situated outside the habitation, found almost at all the sites, was now the normal practice. Further, in a cemetery near the modern town of Yangi-Kala, a little south of the site of Geok Tepe, even the evidence of cremation in the form of open fires within the burial pits, has been recorded (Ganjalin 1956). There were seven graves here. They contained one to four earthen pots as offerings, near the head or at the feet. Interestingly enough, two of the graves contained anthropomorphic figurines, made of clay, which copied the style of the similar figurines of Namazga V times. In one of the burials, four pots, one figurine and six items of jewellery have been found. The pottery at Auchin-Depe, and other

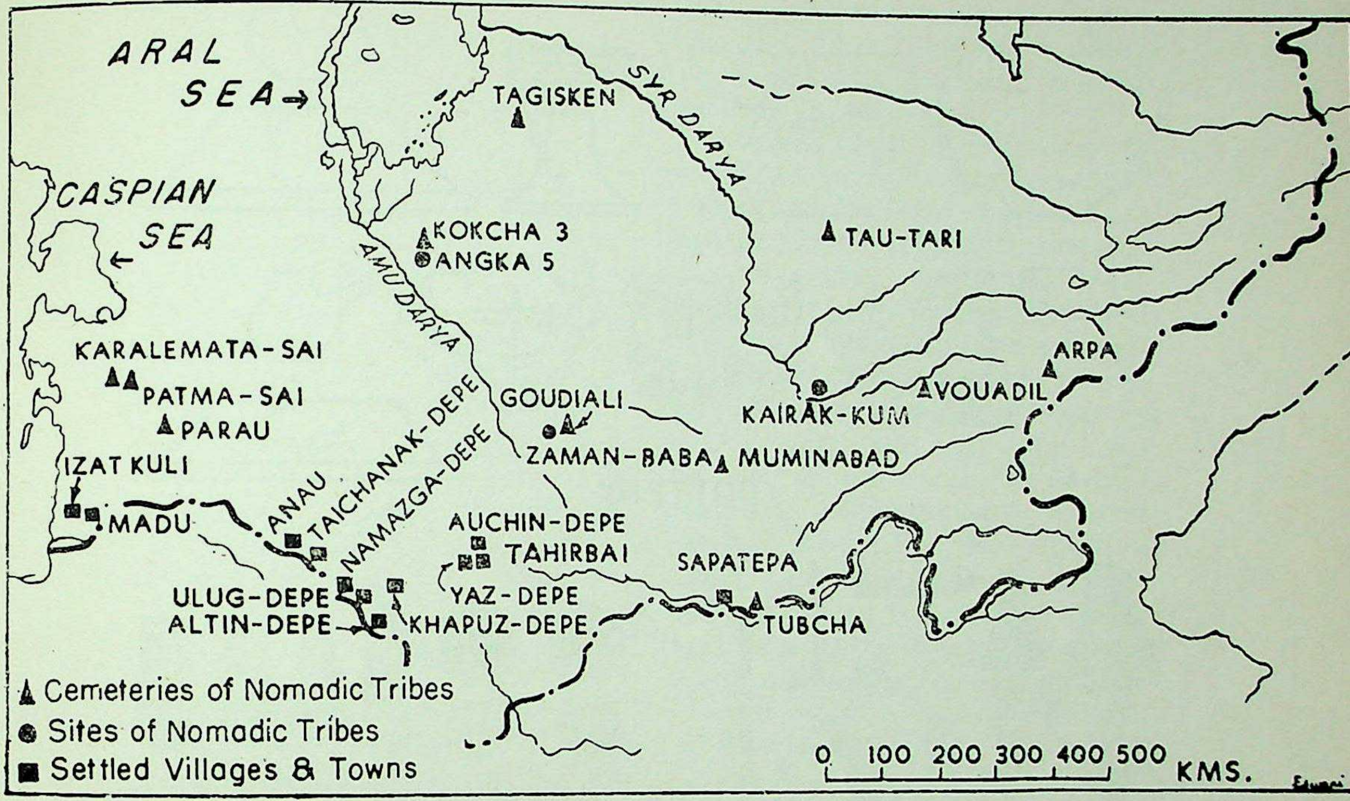

ARAL SEA
CASPIAN SEA
SYR DARYA
AMU DARYA
TAGISKEN
KOKCHA 3
ANGKA 5
TAU-TARI
KARALEMATA-SAI
PATMA-SAI
PARAU
IZAT KULI
MADU
ANAU
TAICHANAK-DEPE
NAMAZGA-DEPE
GOUDIALI
ZAMAN-BABA
MUMINABAD
KAIRAK-KUM
AVOUADIL
ARPA
AUCHIN-DEPE
TAHIRBAI
SAPATEPA
TUBCHA
ULUG-DEPE
ALTIN-DEPE
YAZ-DEPE
KHAPUZ-DEPE
▲ Cemeteries of Nomadic Tribes
● Sites of Nomadic Tribes
■ Settled Villages & Towns
0 100 200 300 400 500 KMS.

**Fig. M.3.5. Some Late Bronze Age sites in Central Asia**

sites, such as Tahirbai-Depe, where along with a few mud-brick structures a very interesting circular kiln was found, had now new types not recorded in the Kopet-Dag region (Fig. 3.27) such as dish-on-stand, corrugated bowl-on-stand, tubular spouted small vessels, globular vessels with concave bottom, flat based cups, jars with incised designs, etc., usually in grey or light red wares (Fig. 3.28 : a,b,c). But the workmanship, clay, etc., of these wares were cruder than those of the pottery of the Middle Bronze Age. Still, the pottery was wheel-turned and baked in double tiered kilns. Here it is essential to note that these types were more commonly found at Tahirbai-3 than at Auchin-Depe, the oldest of all the Murgab sites, where a red ware, nearer to that of Namazga V, predominated. It will, incidently, indicate that the Murgab delta was colonized first by the submontane people. This deduction is also based on the evidence from certain pottery types and decorations which are found in both the regions, *e.g.*, large globular vessels with concave bottom and incised designs of groups of parallel wavy lines. It is significant to note that some of the vases as well as the dishes and bowls-on-stand resemble similar pots and pans found at the Harappan sites of earlier dates. The use of tubular spouts was also attested in the Jorwe

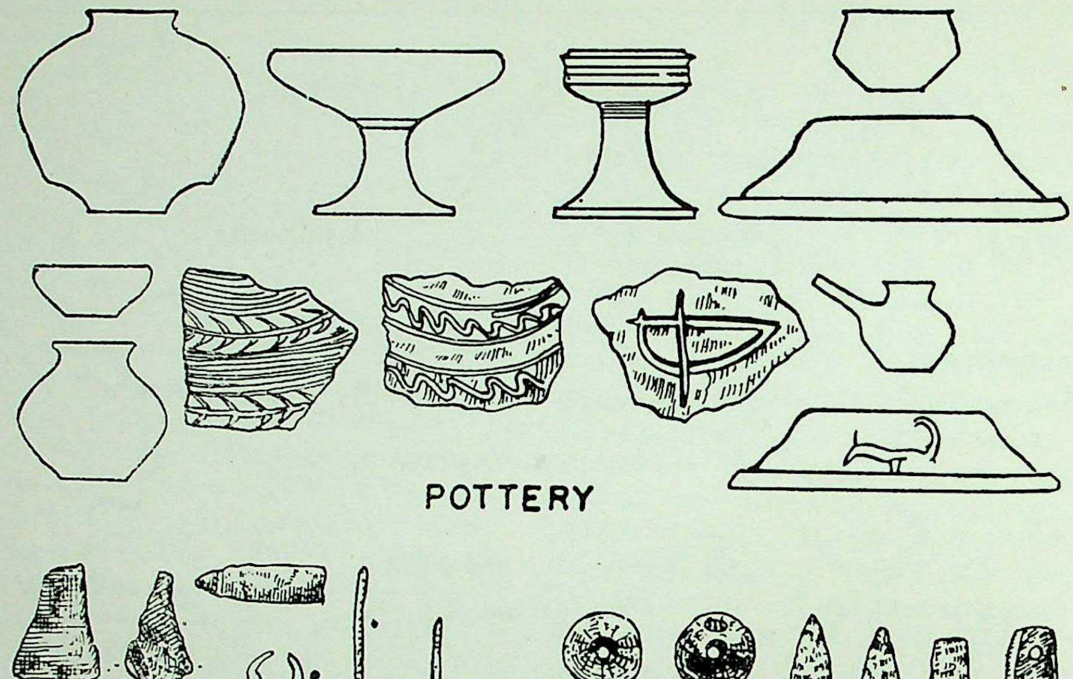

POTTERY
METAL OBJECTS
STONE OBJECTS
A
A
B
CLAY FIGURINES
SEAL
BONE
POTTERY KILN

**Fig. 3.27. Namazga VI (Late Bronze Age) Culture-complex.** *After Masson*

complex of the post-Harappan times in India. But, while quoting both these examples, the intention is not to suggest any generic relationship between the Indian and Central Asian types, these are the examples only of similar pot-forms.

But possibly much more significant are the copper-bronze objects which exhibit clear links with the past. Some of these objects include ridgeless flat knives and daggers with tangs, chisels and awls with rectangular cross-section and cleavers. Curved sickle is

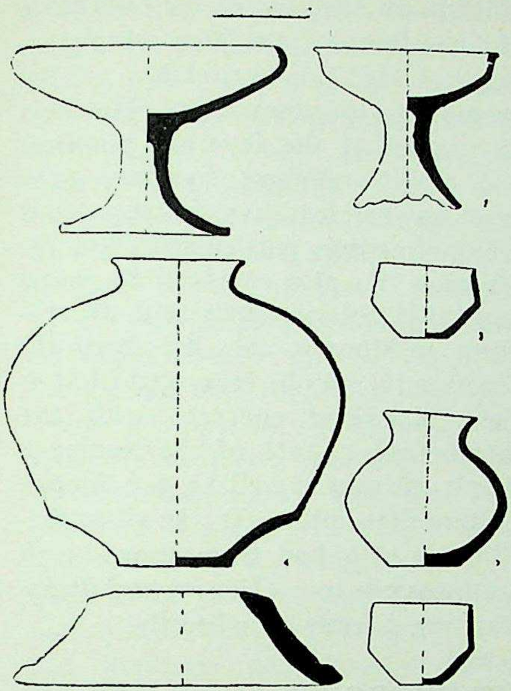


**Fig. 3.28 a. Late Bronze Age (Namazga VI) pottery types from Tahirbai-Depe**

equally important since on the the one hand it is found at Mohenjodaro and Sialk A and, on the other, in the Andronovo complex of north-eastern part of inner Central Asia. These tools were augmented by leaf shaped and barbed flint arrowheads which are not found in the Harppan complex. Now the bronze pins became very popular, some with beautifully decorated tops showing eight petalled rosettes and other motifs. Steatite beads decorated with concentric circles also seem to have been in great demand. They have their analogies in Hissar IIIC as well as in the Jhukar Culture of the Indus basin. And then, the pendant-seals of bronze. A few of them, cruciform and rosete types, were still in use at the Murgab sites, but certainly not the zoomorphic type.

Terracotta figurines, both animal and human, are now miserable; just a few of them and that too crudely modelled. The nude mother-goddess figurines are now also different from those of the earlier period.

Something about their economy. It was mixed, agriculture-cum-pastoral. In the Namazga-Depe zone, Elken-Depe has yielded unmistakble evidence of wheat, barley and grapes while Tekkem-Depe has given us bones of sheep, goat, pig, cow, camel and, possibly, horse. In both the spheres there was hardly any change from the earlier items, although pigs and cows were not attested in the osteological material of Namazga V times at Namazga-Depe. To that extent a change back to Namazga III type is visible. This may however, be due to the topographical similarity between Tedjen and Murgab deltas, the former occupied during Namazga III times and the latter now.

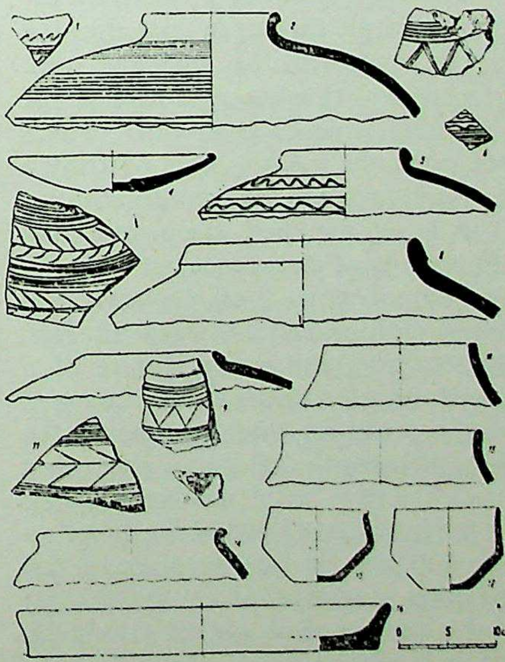


**Fig. 3.28 b. Pottery from Tahirbai-3**

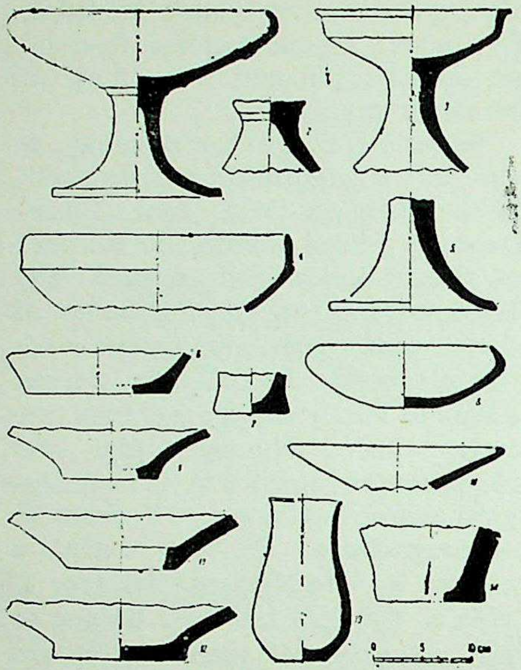


**Fig. 3.28 c. Late Bronze Age pottery types from Tahirbai-Depe**

Interestingly enough, there is a beautiful simple carving in bone showing a male head with the hair and neck decorated with criss-cross pattern. A pot-stand depicts a goat, also in incised technique. A pot-sherd portrays a bow-and-arrow in the similar fashion.

All put together, the picture that emerges is of decadence but not total decline; of population dispersal and not migration-under-threat. In fact, the Murgab Delta presents more of a transformation of the earlier complex in a new set-up than just being the last flicker of a glorious past, that what the term 'total decline' implies. In the absence of the practice of collective burials, it has been suggested (Masson and Sari-anidi 1972; 152) that a new set of people are also involved in the make up of the population of the Murgab. The suggestion gets strength also because of the emergence of a new form of the terracotta figurines and the non-availability of the zoomorphic pendant-seals. Needless to stress that the funerary practices and magico-religious figurines go a long way to identify a homogeneous group of people, particularly when the situation is also marked by some diognastic pottery types and decorations. In Murgab, this has been the situation. It may be reiterated that it had maintained contacts with the submontane culture of the Namazga sites in the west as well as the Steppe Culture sites in the east. In all probability, it also had connections with north-eastern Iran (Hissar) and India (Jhukar), directly or indirectly.

## STEPPE BRONZE AGE COMPLEX

Once we leave south Turkmenia, the traditional home of higher cultures, and move northwards, we come across a vast mosaic of non-urban bronze-using cultures in which greater attention was paid to the funerary rituals and structures than to the dwellings of the living beings. It reminds us of the situation existing in India during the Iron Age megalithic period. Collectively, they form the Steppe Culture Complex, since most of them cover the vast steppe region from the Yenisei to the Ural, and also share each others' characteristics. Of at least half-a-dozen of regional variants of this culture, two are the major ones : the 'Timber-Grave' (Srubnaya) Culture and the Andronovo Culture, the former originated in the Volga region and covered vast areas of Western Kazakhstan while the latter (designated after a village of this name near Achinsk) originated in Central and

Eastern Kazakhstan and covered the vast areas in Kirgizia and the Fergana Valley. The two traditions seem to have met in the middle reaches of the Zaravshan basin at sites like Muminabad Cemetery.

It is, of course, an extremely simplified version of a very complex situation in which not two but several tribal groups played their migratory roles, as may be judged from the variations in graves, culture-matrices and physical types. There is a section of opinion which connects them with the people of the Indo-Iranian speech and, eventually, with the Rigvedic Aryans in India, but let it be clearly stated that in the absence of writing and traditional accounts all the theories are based on the supposed correlation of certain linguistic groups with archaeological cultures and, therefore, by and large, highly subjective. It reminds us of a dozen theories in India in the context of the Vedic Aryans.

### 'TIMBER-GRAVE' COMPLEX

The culture-complex of north-western Central Asia, termed here as 'Timber-Graves', after the general usage, is, in a sense, misnomer since basically it is characterized by, what is called, 'Cairn Burial complex'. It means the cemeteries which are located north of the Balkhan region comprise of heaps of small stones under which lie buried pits capped with stone slabs which are marked with traces of campfires. The dead was laid flexed with the head facing east. The graves were poorly furnished, yielding a few crude earthen pots and a wooden vessel. The vessels and the funerary rites of campfires, of course, remind us of the Timber Grave complex, and, to that extent, it may be surmised that the cairn burials of north-western Turkmenia (Mandel'shtam 1966; also 1967) had strong influences coming from the lower Volga region. It is significant to note that similar graves have been found at least at two places in the south of Balkhan also, to the west of the modern town of Kizil Arvat.

## Amu Darya Delta Group

### KOKCHA-3 CEMETERY

In the Amu Darya Delta, we have another group of burials and cemeteries (Fig. 3.29). In grave-furnishings they are several times richer than those in western Turkmenia. In construction, on the basis of the remains that we are getting now, they are, however, to be taken 'simple'. The most important site of this group is Kokcha-3.

It was in 1954 that this site was discovered by the expedition conducted under the direction of S.P. Tolstov. In 1955 it was excavated by Tolstov along with M.A. Itina (Itina in Tolstov 1961). The burials belonged to the Tazabagiab Culture of the Bronze Age of the second millennium B.C. Tazabagiab Culture, it may be mentioned, belonged to the group of Eurasian Bronze Age cultures of the northern steppes, and, in every likelihood, it was formed in the steppes of Western Kazakhstan and along the southern slopes of the Ural.

Of the 74 tombs excavated here, covering an area of 143 × 67 m, 43 were found more or less intact. Of these, 27 belonged to the adults and 16 to the infants. Of the 43 preserved tombs, 5 yielded single female skeletons,

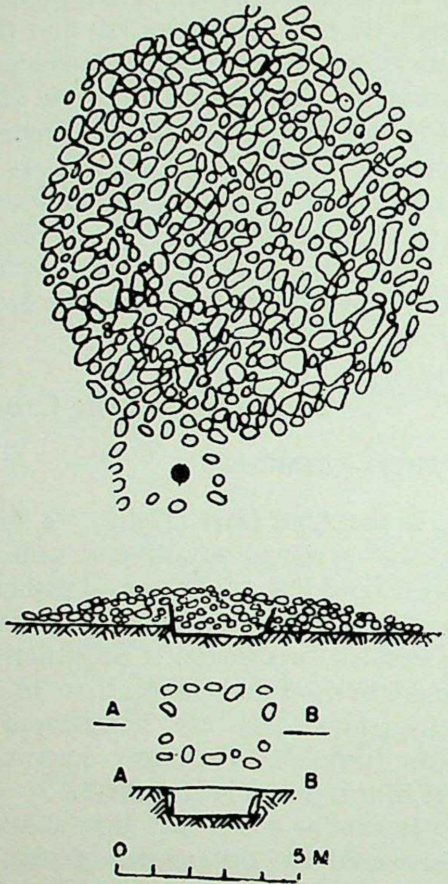


**Fig. 3.29. Cairn Burial of Late Bronze Age, Khorezm**

10 single male skeletons, 5 skeletons of couples of opposite sexes buried simultaneously; 6 of couples buried at different periods ; 1 female double-burial, both buried simultaneously; 1 female double burial, each buried at different times; 1 woman with a child; 13 single children, and 3 children in double-burials buried simultaneously. The tombs, found without any fence, are of rectangular or square shape with rounded up corners. Practically all of them are oriented east-west, the head being towards the east. Big tombs for couples measured 2·5—2·2 × 2—1·8 m; small tombs for single bodies, measured 1·5—1 × 1·9—1·7 m; tombs for infants measured 1·2 × 1 m and 0·7—0·9 × 1·2 m. While many of them were only 0·3 to 0·6 m deep, at least one was 85 cm. deep. In fact, the depth depended upon the hardness of the land. Since in some of the graves vegetable matter has been found, it is presumed that the dead bodies, at least in these examples, were wrapped in the matting (of reed?) before they were lowered in the burial pits. The bodies were usually buried in flexed position. It is to be noted that while men were buried on their right side, the women were buried on their left side. Some of the males were buried with their faces kept downwards.

The grave-goods were usually very poor. Thus although the ritual appears to follow the rule that near the head a pot will be kept, yet in many examples it was not followed.

Significantly, in one of the tombs some pieces of charcoal were found. In a number of examples the pots bore soot marks. In this connection, it may be mentioned that the ritual which probably symbolized the preparation of food for the dead was commonly practised by the Andronovo Culture. Except for a single example in which small bits of birds' bones were found, the graves yielded no bones of birds or animals. The pots of various forms, numbering 93 in all, are, in most of the examples, found decorated with broken lines and triangles incised on the surface (Fig. 3.30).

The grave-offerings, however, did include some objects of stone and bronze—bronze ornaments, needles for women and four-edged skewers with a bone handle (for men). The

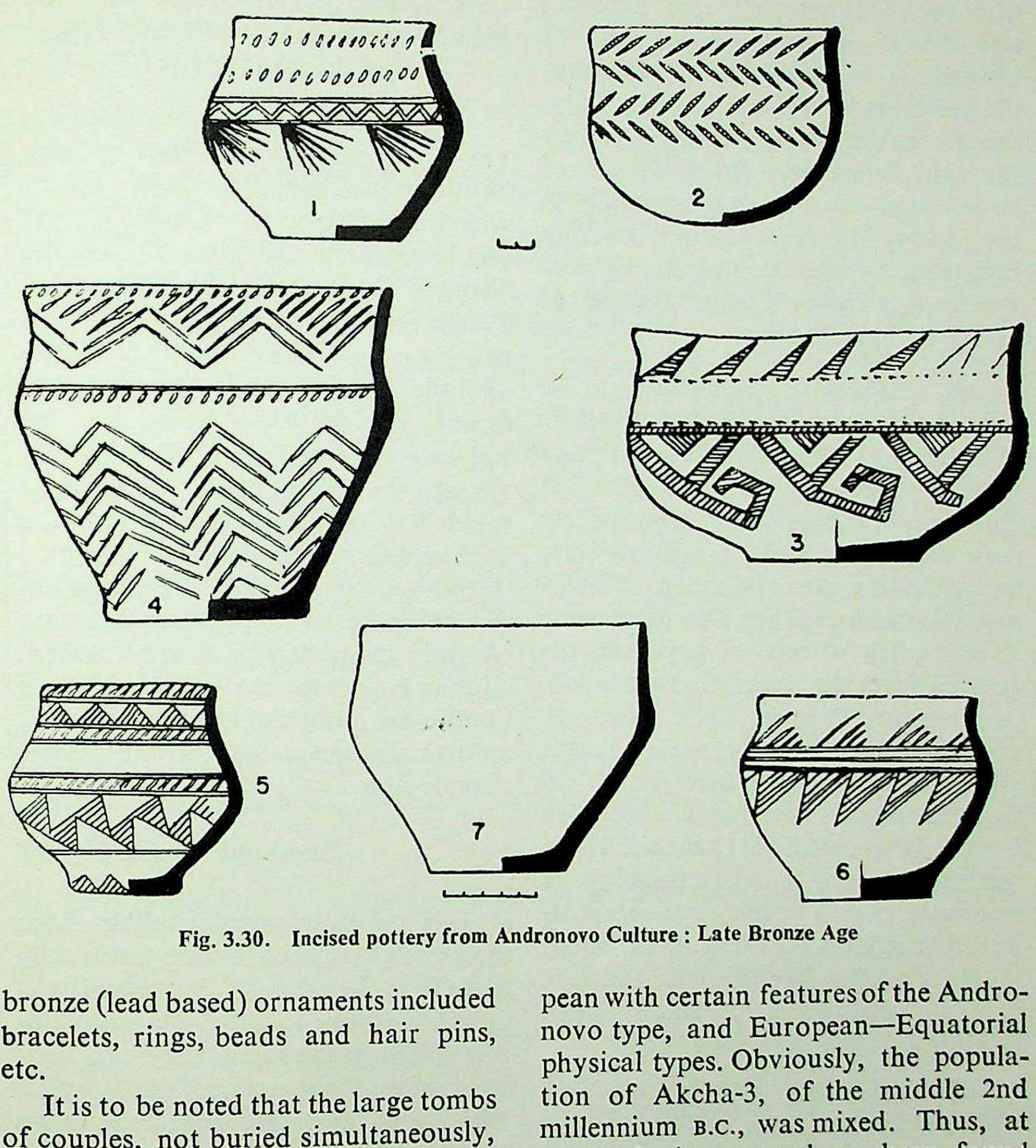


**Fig. 3.30. Incised pottery from Andronovo Culture : Late Bronze Age**

bronze (lead based) ornaments included bracelets, rings, beads and hair pins, etc.

It is to be noted that the large tombs of couples, not buried simultaneously, left at the first instance sufficient space for the partner so that it may be opened and cleared for the partner as and when required to be buried. Undoubtedly, 'Kokcha-3' was the burial ground of a big community with a well established family ethical codes.

The anthropological studies carried out on the skulls have shown that both the males and females belonged to the Indo-European, Mediterranean, European with certain features of the Andronovo type, and European—Equatorial physical types. Obviously, the population of Akcha-3, of the middle 2nd millennium B.C., was mixed. Thus, at Akcha-3, the graves have been found without tomb-stones but the shallow pits contained one to four bodies in flexed manner with the head towards the west. Most of these appear to be family vaults, used repeatedly for the enternment, including those of children. It is interesting to note that while males were laid on their right, females were laid on their left. The grave-goods consisted of, besides pottrey near the head, bracelets and pendants and beads of sardonyx as well as bronze. It is important to note that the pendants were analogous to those found in the Volga region Timber-Graves. When seen in the light of common physical types present in both the regions, it is surmised that the Amu Darya delta was colonized by the Bronze Age Steppe Culture people of North-Eastern Europe.

As said earlier, according to a section of opinion, headed by S.P. Tolstov, this group should be taken as a unit by itself and called Tazabagiab Culture. Archaeological remains show that they were great stock-breeders, domesticating cows and sheep, occasionally, horse too. They also used carts, if terracotta wheels of toy-carts recovered from the excavations are any indications. They brought water to their fields through irrigational channel whose traces have also been found. In fact, settlements were made along the banks of these artificial channels. These settlements were small, consisting of not more than a dozen semi-subterraanean huts, each covering 50 to 80 sq. m. area. A hut like this was sufficient for a comparatively small joint family.

Thus, Western Group, including north-western, and Amu Darya Delta Group form two major facies of the 'Timber Grave' tradition in Central Asia. The former covers western Turkmenia while the latter, western Khorezm. Masson, however, sees in both of them unmistakable signs of the Western Andronovo Culture whose original home, as stated earlier, is located in the steppe region (Masson and Sarianidi 1972, 153).

## EASTERN ANDRONOVO COMPLEX : CENTRAL AND EASTERN KAZAKHSTAN

The Eastern Andronovo Complex has at least three facies or groups, besides the Tashkent Oasis Group wherein influence of 'Timber Grave' still lingered: the Kirgizia Facies, the Fergana Facies, and the South-West Tadjik Facies. The Kirgizia facies has two groups: the Tien-Shen Group and the Semirechensk (seven rivers) Group, the Fergana facies has the Fergana as well as Kairak-Kum Group, the South-West Tadjikistan facies has the Bishkent Group, the Tashkent Group has its own features.

Without going into the merits of this grouping, as suggested by Masson, which is apparently not very sound, we may look into the salient features of different groups of these cultures for an over all assessement of the Steppe Bronze Age.

### Tashkent Oasis Group

It is a slightly complex affair since the graves have been found individually more than in groups. But metal artifacts have been found both individually and in groups and they are very interesting. Thus, some of the bracelets with spiral terminals appear to have been derived from eastern and central Kazakhstan. A heavy-butted axe from Chimbailyk clearly recalls Uralian influence on metal working of Tashkent. But possibly much more important is the discovery of a post-cremation burial with ashes and richly decorated pots since similar features mark the Kirgizian group of burials (Masson 1966).

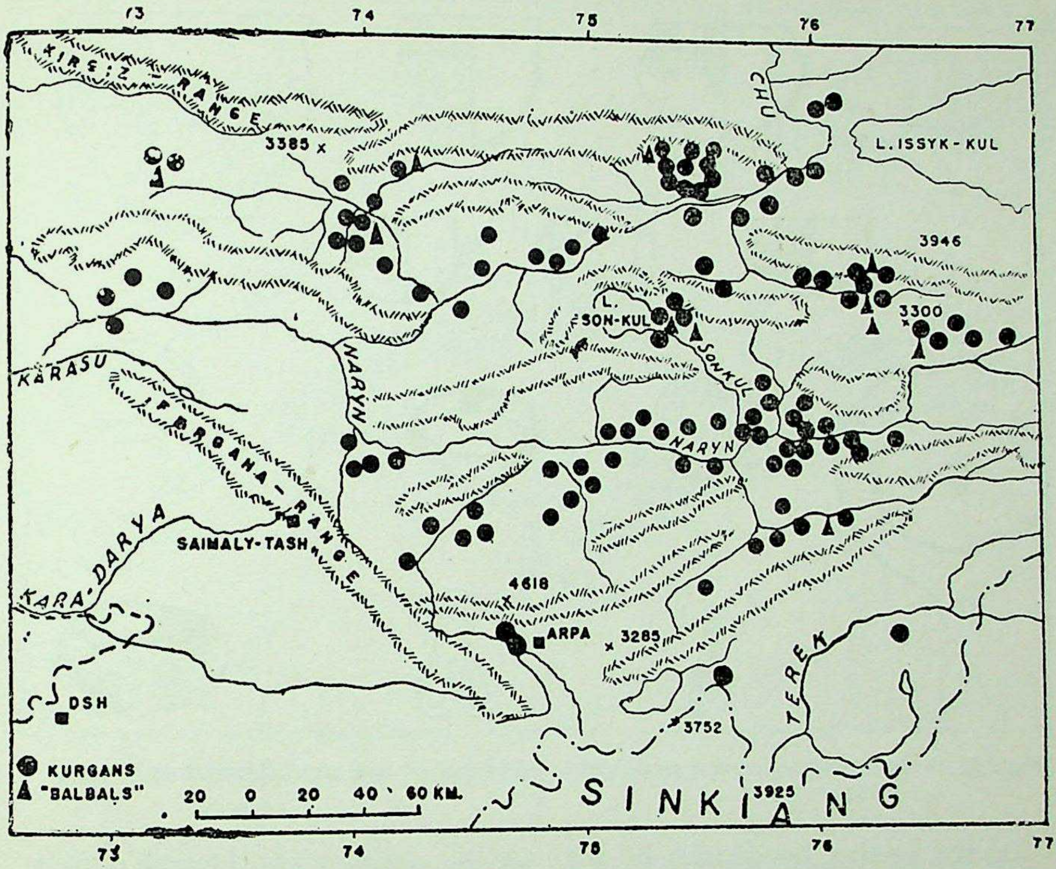

73
74
75
76
77
KIRGIZ RANGE
CHU
L. ISSYK-KUL
3385
3946
3300
L. SON-KUL
SONKUL
NARYN
KARASU
FERGANA-RANGE
NARYN
KARA-DARYA
SAIMALY-TASH
4618
ARPA
3285
TEREK
DSH
3752
KURGANS
"BALBALS"
20 0 20 40 60 KM.
SINKIANG
3925

Fig. M. 3.6. Map showing Late Bronze Age—Early Iron Age Kurgans, and 'Balbals' of the Historical Period. *After Frumkin*

## Kirgizia Mountainous Group

The graves in this group (Fig. M. 3.6) are marked by stone-slab enclosures, pits lined with stone slabs and containing post-cremation ashes, as well as handmade crude pottery, generally plain. The grave-goods include bracelets, ear-rings, plates, rings and beads of bronze, sometimes covered in gold leaf (Fig. 3.31). The beads, about 1300 of them, also include those made of paste and antimony. One of the cemeteries was located at a great height, in the Arpa Valley of the Tien-Shan mountains (Kozhemioko 1960, also Bernsh'tam 1952).

## Fergana-Kairak-kum Group

The cemeteries and graves of this group contained flexed burials, as in the western group, but the stone-slab cists of oval or rectangular types have their analogies in the Kirgizia group. In the vicinity of Fergana there are two important cemeteries, one at Vuadil and the other at Karam-Kul. In both of them the oval and rectangular stone enclosures contained flexed burials (Gamburg and Gorbunova 1960; also 1957).

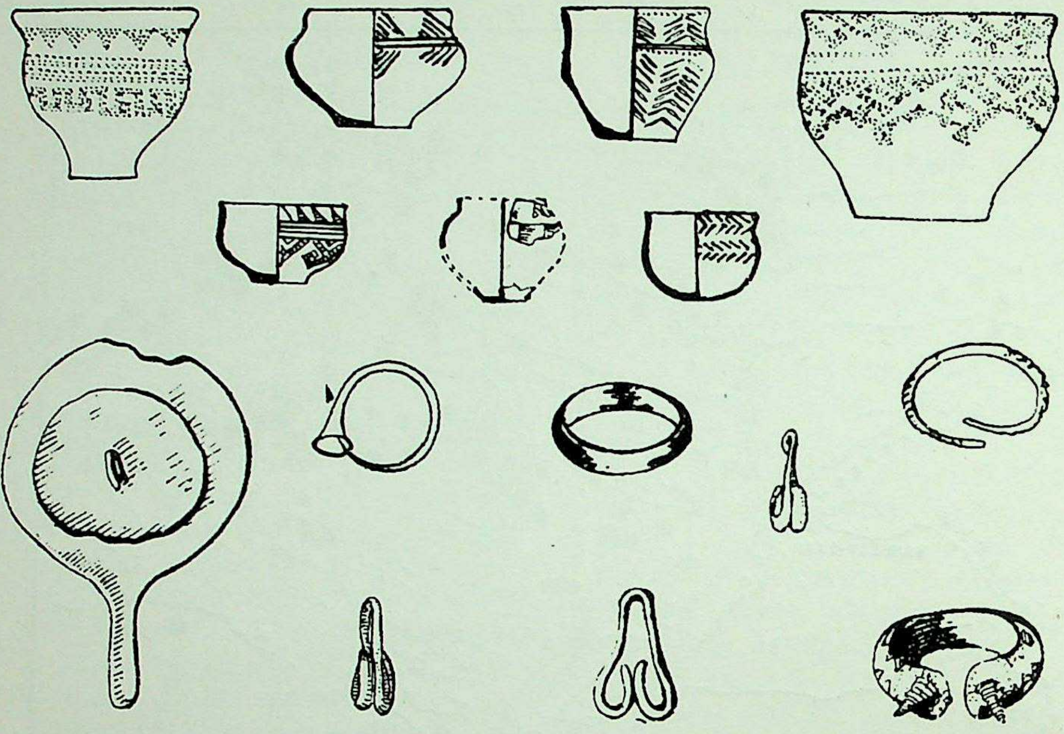


**Fig. 3.31. Pottery (handmade and decorated with incised designs) and metal objects from Bronze Age Andronovo sites**

On the western boundaries of the Fergana Valley, there flows the main course of the Syr Darya. On its right bank, between Leninabad and Kanibadam, several small settlements and cemeteries have been explored. These are designated as the remains of the Kairak-Kum or Kayrakum culture (Tolstov 1962) and they exhibit closest affinities with the Fergana group, hence 'Fergana-Kairak-Kum Group'. The dead were buried in flexed position within stone-slab lined pits, as in the Fergana Valley.

Of the dwellings, not much remains but from the scrapings in the habitational areas, which ranged between quarter of an acre to 7·5 acres, in rare examples even 25 acres, some interesting material has been collected. Moreover, careful calculations based on the position of the hearth make a common sizable dwelling some 21×17 m in area, good enough for a small joint family. As was the case with other Andronovo groups, farming and stock-rearing were supported by hunting and fishing. These were, therefore, semi-sedantary cultures. Although cereals could not be identified, the discovery of a large number of stone querns does suggest that some form of river-valley agriculture was practised here. The species domesticated by the people included sheep and cattle as well as the horses. Spinning and weaving also formed part of their daily life.

The Kairak-Kum pottery falls into the general category of the Andronovo: handmade jars decorated with puntured and comb designs incorpora-

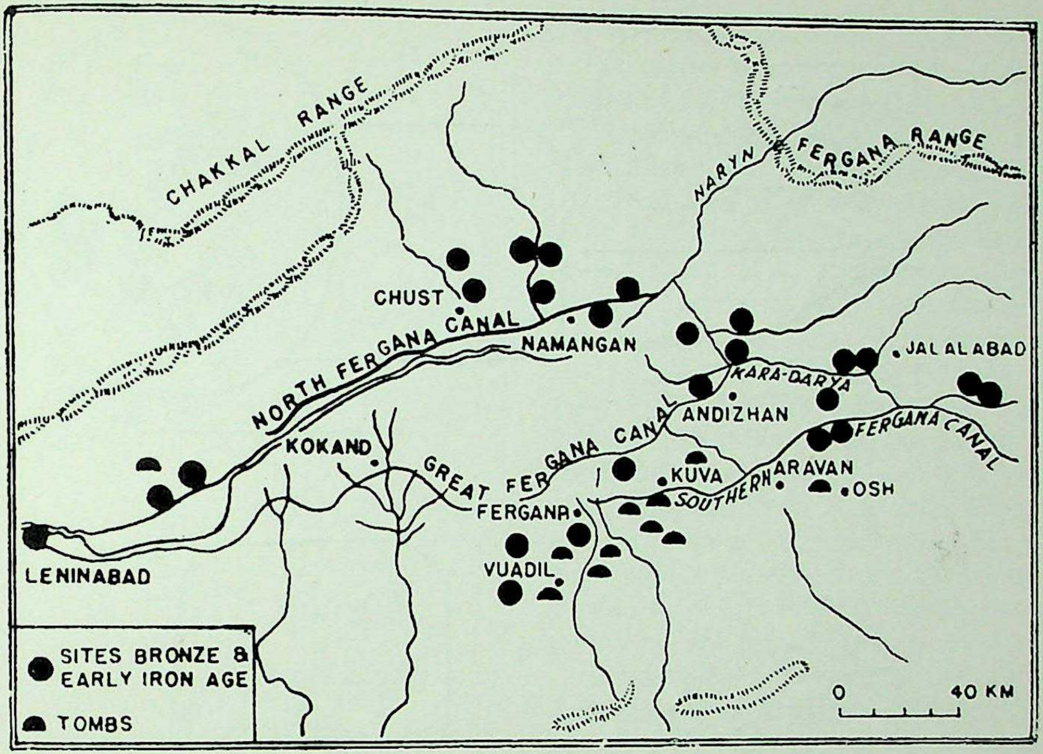

CHAKKAL RANGE
NARYN
FERGANA RANGE
CHUST
NORTH FERGANA CANAL
NAMANGAN
JALALABAD
KARA-DARYA
ANDIZHAN
KOKAND
GREAT FERGANA CANAL
FERGANA CANAL
KUVA
ARAVAN
OSH
SOUTHERN
FERGANA
VUADIL
LENINABAD
SITES BRONZE & EARLY IRON AGE
TOMBS
0
40 KM

Fig. M.3.7. **Map showing Late Bronze Age and Early Iron Age sites in Fergana region.** *After Frumkin*

ing geometric forms. Interestingly enough, there are some moulded pots, moulding being done round a cloth bag filled with sand, traces of which are clearly visible on the inner surface of the vessels.

The Kairak-Kum people were practising metal-smiths also. Besides copper-bronze slags, the settlements yielded a number of beautiful moulds, even for heavy butted axes. This shows the mixed nature of the economy of the people. It is possible that they were the suppliers of the metal tools to the neighbouring peoples also.

## Lower Zaravshan Group

In the context of the Middle Bronze Age, we have already mentioned the existence of the Zaman-Baba Culture in the western part of the Kyzil-kum desert. The culture, even during the Late Bronze Age, flourished in the same manner. The people lived in semi-subterranean huts and made handmade pottery decorated with incised and stamp patterns, along with stone beads and copper-bronze objects (Gulianov *et el* 1966).

## South-western Tedjik Group

### BISHKENT CULTURE

The sites of this group are located in the valleys of the Vaksha and Kafirnigan, such as Tulkhar cemetery. Their cultural milieu is known as Bishkent. The Bishkent Culture (Masson 1966, also MIA 15, 37, 66, 124, 136) developed

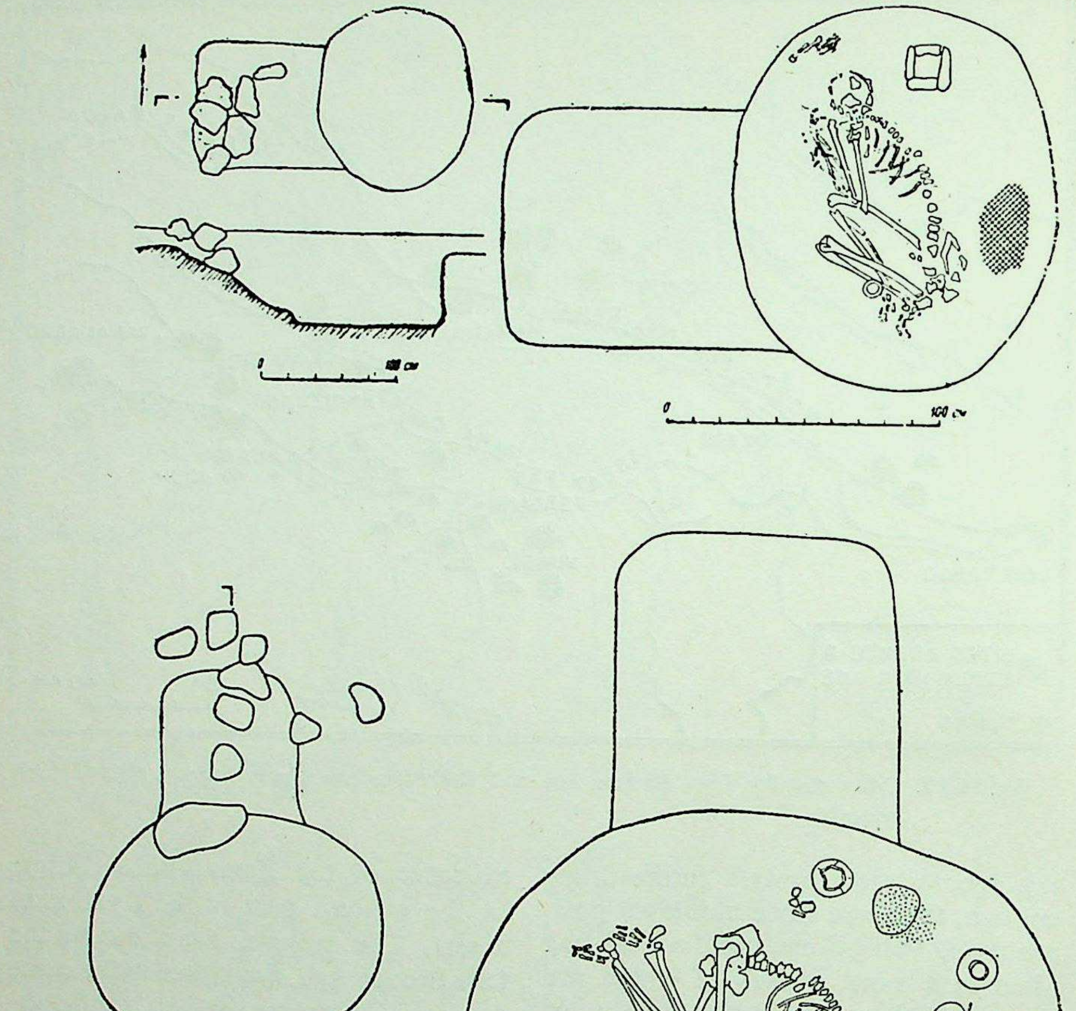


**Fig. 3.32 a. Bronze Age burials in southern Tadjikistan, Tulkhar Group**

through three different stages, the earliest being of the 15th century B.C. while the latest being of the post-10th century B.C. when a new set of people from the north of the catacomb graves appeared on the scene. It is significant to note that the Bishkent funerary practices belonged to the post-cremation cate-

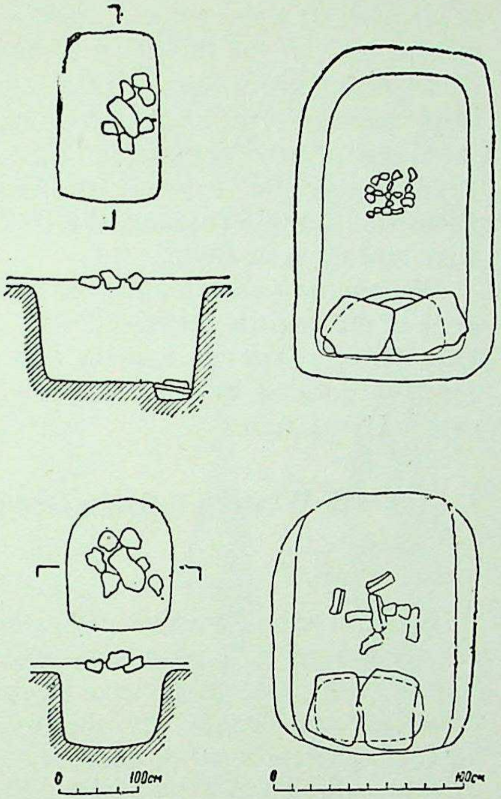


Fig. 3.32 b. Bronze Age burials from south Tadjikistan, Tulkhar-Depe

gory, similar to the one in vogue in Kirgizia. The ashes were entomed in small pits. They also contain small sherds of crude handmade pottery.

The grave-pit was interesting. It had a supplementary depression which was dug at the bottom of the pit to hold the cremated remains of the dead; it was covered over with fragments of stone slabs. Next to it a pattern of stones was laid out in the form of a circle with an inscribed cross or swastika. (Masson and Sarianidi 1972, 151). Unfortunately, the dating of these graves (Fig. 3.32 ,a,b,c,d,) is not very certain.

In the second stage of the Bishkent Culture, some major changes in the burial practices seem to have occurred. Cremation changed into complete (flexed) inhumation. The burial pit now had a ramp on one of it sides. At the bottom of the pit, there was, however, a stone-lined depression, as was the case with the burial-pits of the earlier period. It was filled with cinder and ashes, as if temporary hearth was established in it. It is significant to note that the hearths in the female's grave was round while in the male's grave it was square. The difference between a male and a female extended also in the sphere of orientation of the dead body—the female was laid on the left side while the male on the right side. There are some 'twin' burials also, *i.e.*, a grave with two bodies (Masson and Sarianidi 1972, 152). Similar burials were found in the Amu Darya delta also.

On the plane of the material culture, there is an interesting observation : the pottery (Fig. 3.33) and metal artefacts (Fig. 3.34) shared many items belonging to the contemporary south Turkmenia : the elegant wheel-turned pottery, for example, and handle-less oval mirrors, and 'razors', even pins with double-spirial heads, made of copper-bronze (Masson and Sarianidi 1972, 152).

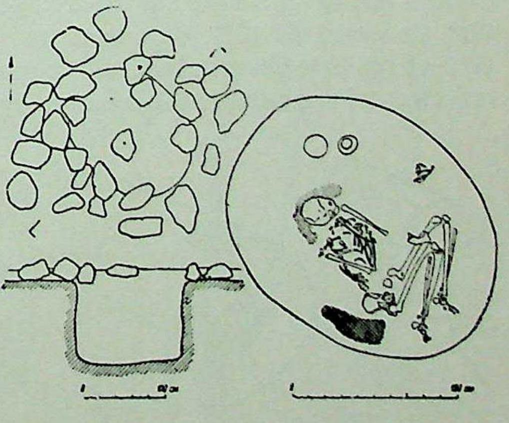


Fig. 3.32 c. Graves of southern Tadjikistan, Late Bronze Age

But it does not mean that the Bishkent Culture of the second phase was the offshoot of the south Turkmenian Bronze Age culture. In fact, while hand-made globular pots of the local origin were very common, copper-bronze knives of the northern regions also appeared on the scene. These are datable to the first two centuries of the Christian era.

In the Bishkent Culture of this phase, therefore, we are possibly dealing with a semi-nomadic culture (characterized by handmade pottery and domestication of sheep, with graves located outside the agricultural land) which came into contact with the sedentary culture of south Turkmenia.

The third and final phase of the South-Western Tadjiki culture is marked by the catacomb graves of the Early Iron Age, doubtfully belonging to the lower Volga tradition.

It is a brief review of an extremely complex affair of cross-currents of cultures possibly brought about by several migrating tribes across the vast stretches of Central Asia. But what is more significant in this phenomenon, as far as developmental history of Central Asia is concerned, is the change that occurred in the settlement pattern—from the submontane and oasis oriented colonization to the river valley occupation. It was a great change in itself since we see the flowering of Early Iron Age settlements into fortified cities along the same river basins which were the scenes of brisk activities in the late Bronze Age, for example, the lower Zaravshan and the Fergana, the Upper Amu and the Anu Delta.

We may now consider the results of some of the recently excavated sites of Late Bronze Age in Bactria, part of which is docaled in Afghanistan and part in Uzbekistan.

## North-Western Afghan Group

### DASHLI TEPE

In recent years some new discoveries of Late Bronze Age have been made (Fig. M. 3.6) in north-western Afghanistan (ancient Bactria) by the Joint Soviet Afghanistan Archaeological Mission (Masson and Sarianidi 1969;

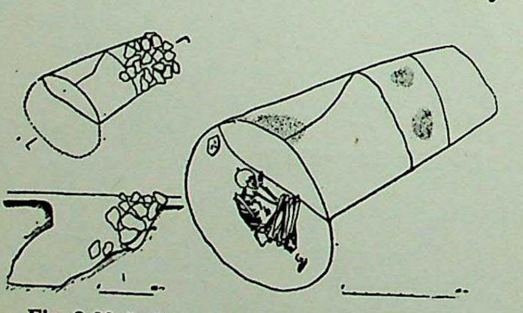


Fig. 3.32 d. Graves of southern Tadjikistan, Late Bronze Age

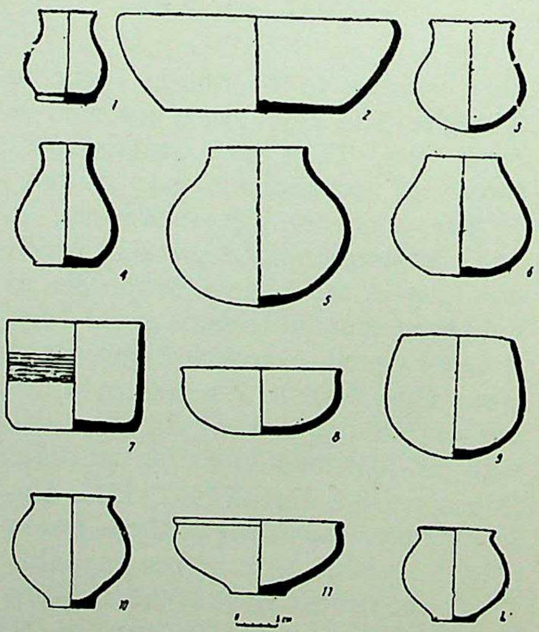


Fig. 3.33. Pottery from Tulkhar Graves, southern Tadjikistan, Late Bronze Age

Sarianidi 1971). Two regions were especially studied, one near Dawaltabad (between Andkhoi—Maimana) and the other to the north of Akcha city (Fig. M. 3.8 and 3.35). The Akchian oasis has yielded better results than the Dawaltabad oasis since here as many as 10 sites, named Dashli-1 to Dashli-10, after the biggest of them known as Dashli Tepe, have been located (Fig. 3.35a). This region of north Afghanistan has been in occupation in Late Stone Age also. In fact, the Amu Darya basin in this region has been

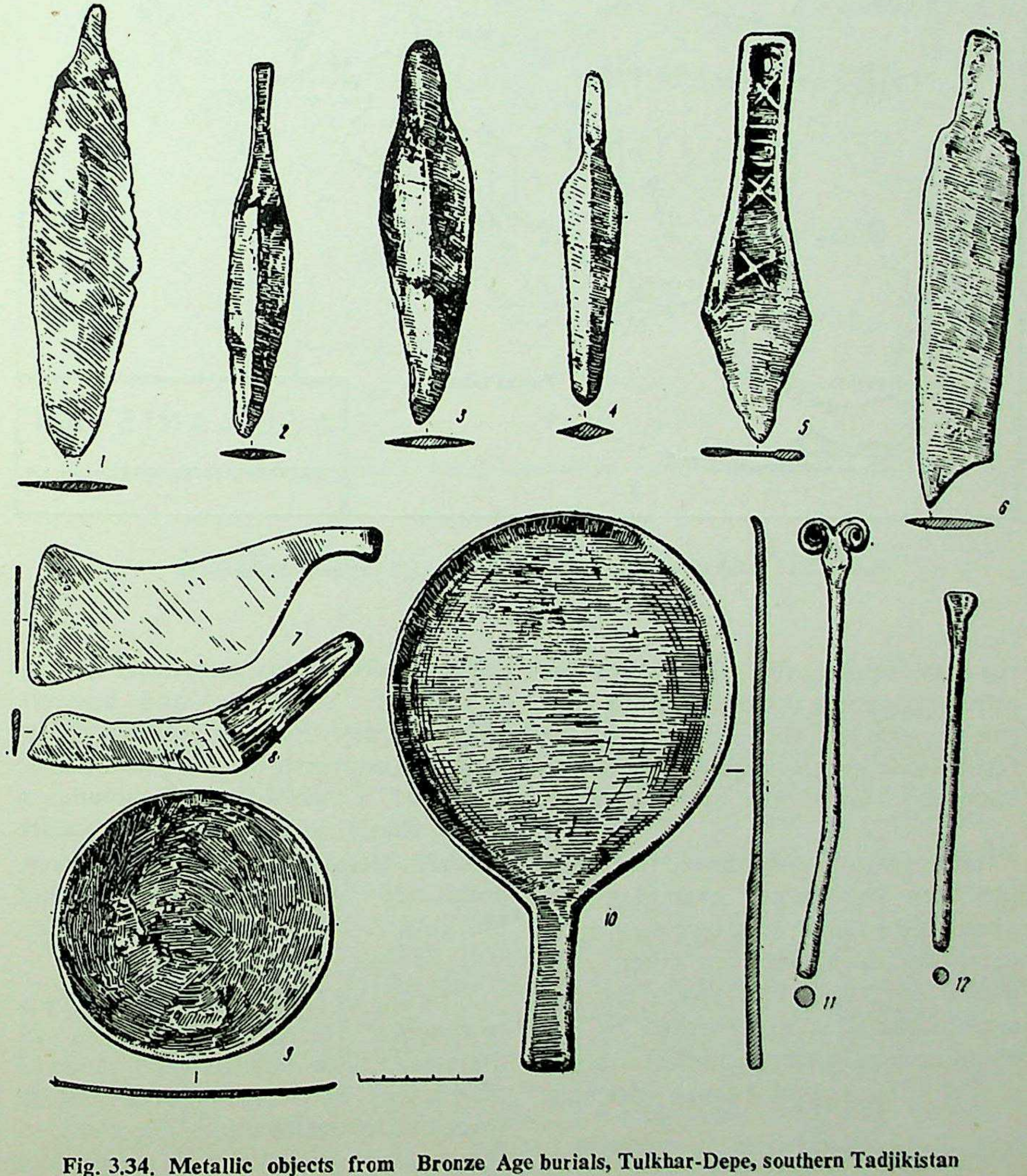


**Fig. 3.34. Metallic objects from Bronze Age burials, Tulkhar-Depe, southern Tadjikistan**

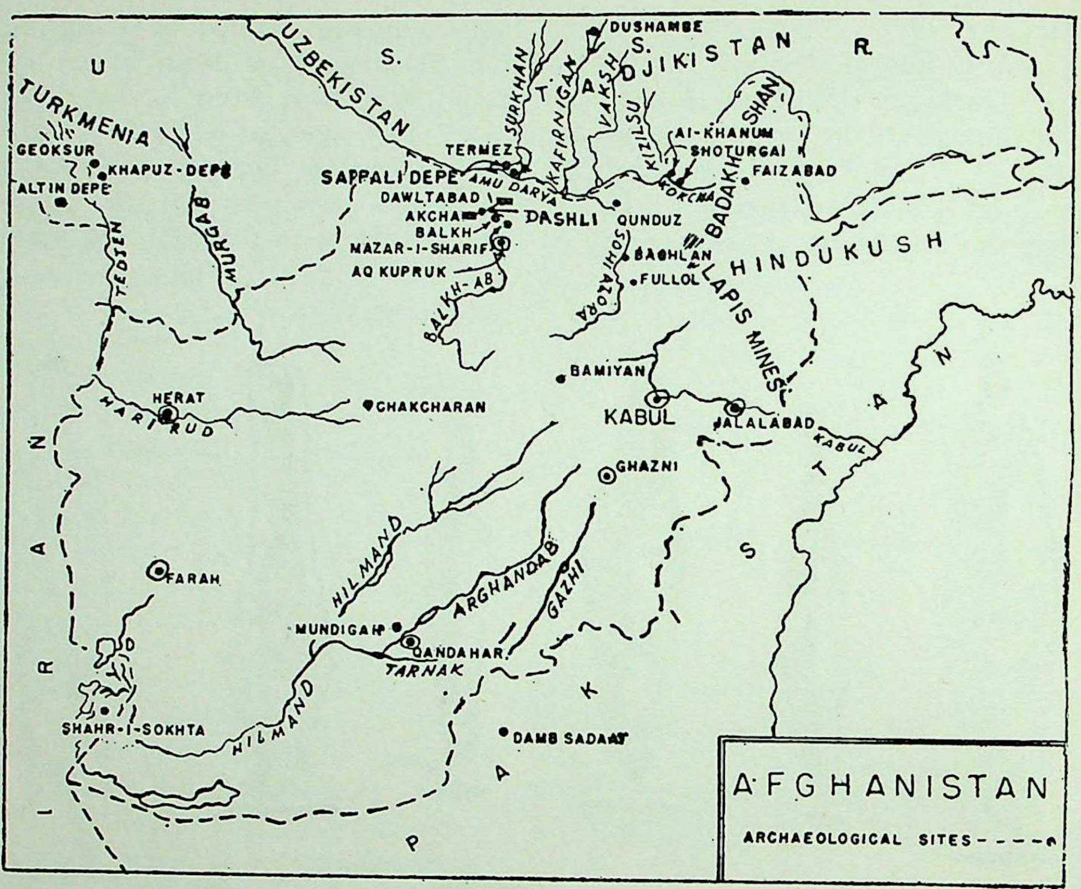

U
S.
S.
R
UZBEKISTAN
TURKMENIA
TADJIKISTAN
DUSHAMBE
GEOKSUR
KHAPUZ-DEPE
ALTIN DEPE
TEDJEN
MURGAB
TERMEZ
SAPPALI DEPE
AMU DARYA
DAWLTABAD
AKCHA
BALKH
DASHLI
MAZAR-I-SHARIF
AQ KUPRUK
BALKH-AB
SURKHAN
KAFIRNIGAN
VAKSH
KIZILSU
AI-KHANUM
SHOTURGAI
FAIZABAD
KOKCHA
BADAKHSHAN
QUNDUZ
SOHIAZORA
BAGHLAN
FULLOL
HINDUKUSH
LAPIS MINES
BAMIYAN
HERAT
HARI RUD
CHAKCHARAN
KABUL
JALALABAD
KABUL
GHAZNI
IRAN
FARAH
HILMAND
ARGHANDAB
GAZHI
MUNDIGAK
QANDAHAR
TARNAK
SHAHR-I-SOKHTA
DAMB SADAAT
PAKISTAN
AFGHANISTAN
ARCHAEOLOGICAL SITES

Fig. M.3.8. Map showing Late Bronze Age sites in northern Afghanistan

the most fertile area which kept on attracting people through various historical periods. However, it was not fertile enough to sustain the urban concentrations of men and materials.

The Dashli sites have, therefore, not been very large, averaging only about 200×150 m although they have been very much near each other, only about ·5 to 3 to 5 km. apart. On the surface, the sites are marked by the abundance of pottery and flint tools as well as a few copper-bronze artefacts.

Other discoveries at these sites include pottery-making kilns, sometimes several of them in one place, and mateal-working area with the remains of a shapeless copper-bronze ingot bearing traces of a melted dagger-blade, a proof that the spoiled objects were reused. Excavations were, however, conducted only at Dashli-1 and Dashli-3.

The site of Dashli-1 is marked by a rectangular fortress, 99×85 m in dimension. The defence walls, made of mud bricks of 50×22—12 cm., were three to four metre thick. The walls, in the centre as well as around the corners

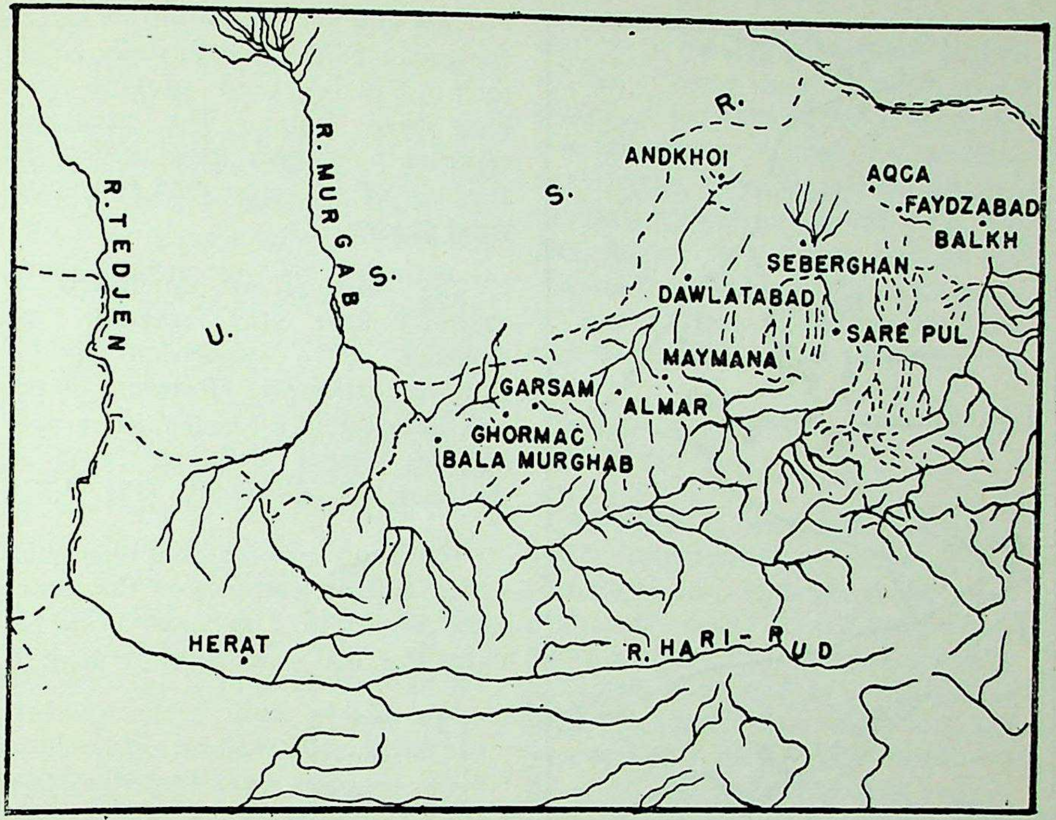

R.
S.
ANDKHOI
AQCA
FAYDZABAD
BALKH
S.
SEBERGHAN
DAWLATABAD
SARE PUL
MAYMANA
R. MURGAB
S.
R. TEDJEN
U.
GARSAM
ALMAR
GHORMAC
BALA MURGHAB
HERAT
R. HARI-RUD

Fig. 3.35. Ancient sites in north-western Afghanistan (or southern Bactria)

are found marked by round towers (Fig. 3.35b).

The residential quarters inside the fortifications were also made of mud-bricks. The quarters have been so close-packed that in about a quarter of the total area so far excavated no evidence of any street, yard or square has been found (Fig. 3.36). In fact, their planning and structure differ considerably from the customary houses which, coupled with the discovery of a large number of egg-shaped sling balls, may suggest that these were meant for defence purposes. Therefore, here we are dealing with a purely military establishment which is rather strange anywhere in this area before the early centuries of the Christian era.

Within this overall picture of the Bronze Age fort of Dashli-1, we have some evidence of living quarters, adjusted directly to the defensive wall, which got burnt anciently. Thus, Room No. 18 is square in form with wall covered with deep wall-niches. The fire-place structure is quite interesting because of a flue, meant for the exit of the smoke, built inside the walls. Along such fire-places, used cooking-ovens have been found. The excavated trenches in this area have shown the remains of not more than two structural phases.

The excavations conducted at Dashli-3 have also revealed the evidence of a somewhat similar fortified settlement. However, in the central region of the settlement a very complex round building, 36 m in diameter, was discovered (Fig. 3.37).

The outer ring-wall has nine small towers and one entrance on the outer face. At 1·5 to 2 m apart from the outer ring and parallel to it there is

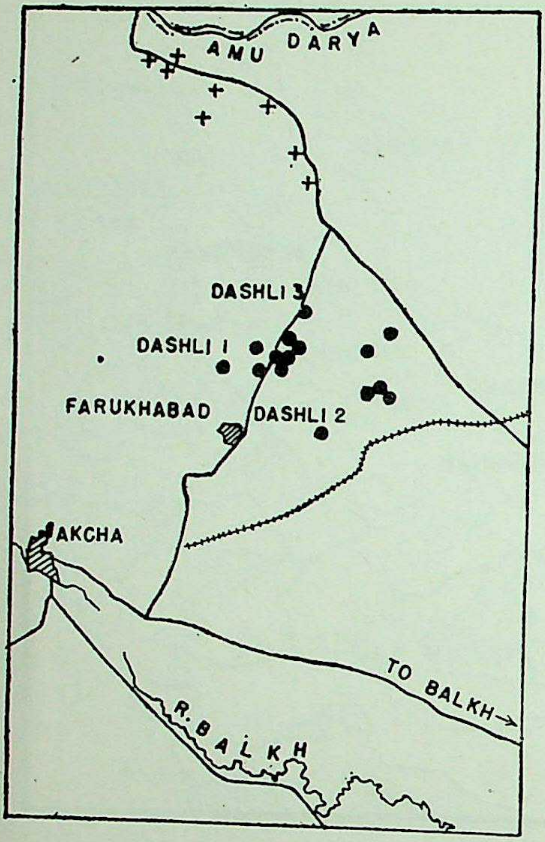


**Fig. 3.35 a.** Detailed location of some ancient sites in north-western Afghanistan. Circles denote Late Bronze Age Dashli sites and crosses denote Late Stone Age sites

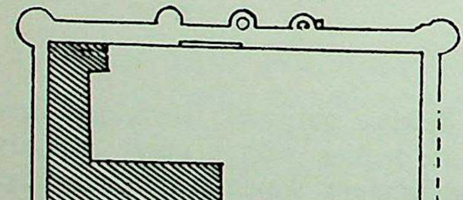


**Fig. 3.35 b.** Dashli Tepe (North Afghanistan) Fortified settlement, Late Bronze Age

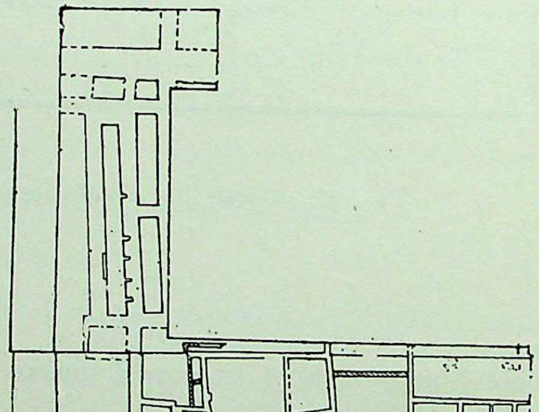


**Fig. 3.36.** Excavated structures along with the fortification of Dashli Tepe (North Afghanistan) Late Bronze Age

another circular wall, leaving in between them a narrow corridor. Near the centre of the building, there is a rectangular structure with several premises, of which only two were cleared, and that too only partially. Room No. 3, however, gives a complete picture of the architecture and its planning. In its eastern part there are two pilasters facing each other and connected with a narrow wall which forms an elevation. The end-wall has two niches, the outer corners of which are embellished with three decorated projections. On the opposite side of the room there is another niche decorated on the same pattern. Each of the two other walls of the room has in the middle a deep niche with marks of deep burning inside. Since this unique structure covers 1/3rd of the total area of the settlement, it may also have been used for some military purpose, although when finally excavated, the excavators feel 'it may turn out to be cultic in nature, particularly if the remains of rectangular fire-places built on brick-platforms are taken into consideration.' Further, if numerous secondary burials of the Bronze Age which partially destroyed the walls of the complex are also taken into consideration, the same conclusions may be drawn. The excavators have also observed that 'the planning of this unique architecture has some resemblance only in Khorezm at Koi Krylgan Kala fortress,' but that fortress belongs to the historical period.

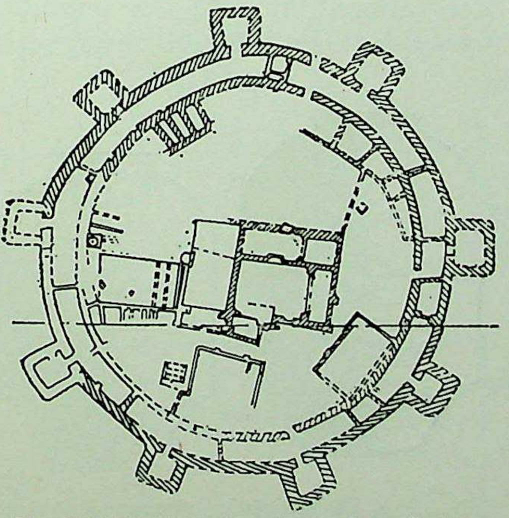


**Fig. 3.37. Dashli-3. Round structure. Late Bronze Age**

HUMAN BURIALS

Burials have been located at several Dashli sites, both at the edge of the settlements and also among the ruins of the settlement. The grave-yard at the outskirts of Dashli-3 was especially studied. It was found that the grave-pits were dug in the virgin soil and were probably filled up with bricks on the top. The skeletons which are not well preserved were found crouched with heads oriented mainly to the north. The grave-offerings consisted of mainly a number of earthen pots.

Burials were also encountered in the ruins of the round building with bodies in crouched position laid with heads towards the north. It is significant to mention that besides pottery, the graves yielded metal pins, mirrors, bracelets, rings and a stone bottle (Fig. 3.39e). Like many other sites, some of the graves were devoid of skeletal remains but full of earthen pots, sometimes over twenty kept in a pile.

ANIMAL BURIALS

It is quite interesting and also significant to note that in the same burial-ground even animals were buried. At least two burials of ram have been

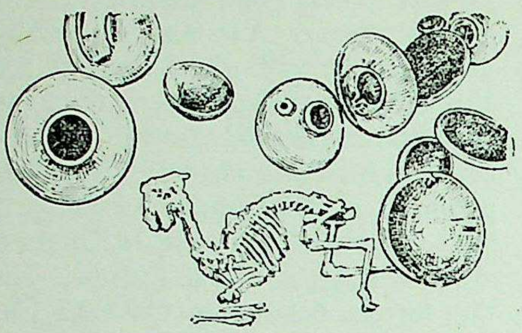


**Fig. 3.38. Animal burial with pots at Dashli Tepe (north Afghanistan), Late Bronze Age**

found at Dashli-1. Complete skeletons, surrounded by many earthen vessels were unearthed with meticulous care. In one of the examples, probably as an offering, ram meat with ribs was placed as may be judged from the rib-bones found near the skeleton (Fig. 3.38).

POTTERY

The pottery was both wheel-turned and hand-made. Vases on stand, goblets, spouted bowls, teapots, graceful vase-cups, biconoid vessels, etc., (Fig. 39; a, b, c) make the entire gamut extremely interesting and significant for the study of pottery found in the Swat Valley graves, at Ghaligai, one of or two examples in Baluchistan (lipped deep-bowls, one from Dabar Kot) and also several examples of bowls-on-stand and channel spouted bowls found in the chalcolithic context of Malwa (type site: Navdatoli) in Central India. We will come to this problem a little later. For the present it may also be noted that the most characteristic forms are thin walled vases and vases for fruit comprising over 80% of all the fine wares found at Dashli-1. Usually, these were of light red colour.

The handmade ware consisted mainly of cooking vessels.

A group of pottery, grey in colour, may also be mentioned since grey ware, of late, has assumed the association of Aryans both in the hands of Russian archaeologists and Pakistani archaeologists in the context of Namazga VI assemblage and the so-called Gandhara Grave pottery. To this, we will come later, for the preset it may be noted that the grey ware includes hemispherical cups and spouted bowls some of which are decorated with incised designs. Sarianidi (1971) however observes, "The grey pottery complex has direct parallels in Bronze Age sites in North-Eastern Iran and was imported from these areas". By this he appears

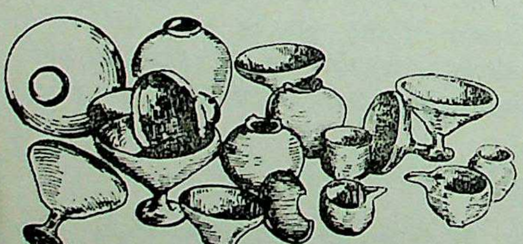


**Fig. 3.39 Pottery from Dashli Tepe (north Afghanistan), Late Bronze Age**

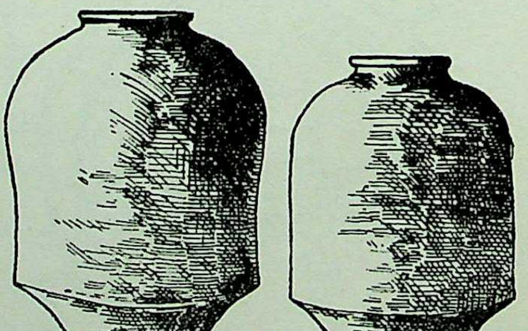


**Fig. 3.39 a. Characteristic storage jars from Dashli Tepe (North Afghanietan), Late Bronze Age**

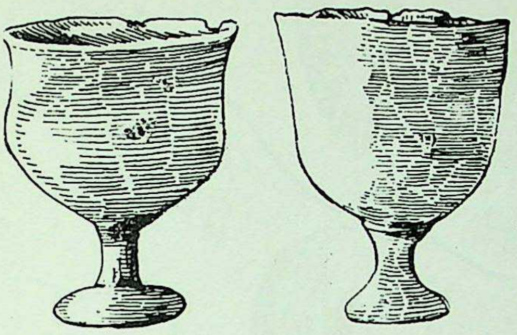


**Fig. 3.39 b. Typical pedestalled cup from Dashli Tepe (north Afghanistan), Late Bronze Age.**

to imply that these pots came from sites like Hissar III, Shah Tepe and Tureng Tepe III, which is, of course, a moot point.

We have, however, a total of at least thirteen major types of pots from Dashli sites, which, incidentally are also found at Sapalli Tepe (Fig. 3.39c).

### STONE OBJECTS

Dashli Culture is marked by stone arrowheads, spearheads and blades made carefully and delicately. However, beads of semi-precious stones have been found. An animal figurine of semi-precious stone has also been recorded from the surface.

### METAL OBJECTS

The copper bronze objects include long pins, razors, mirrors, bracelets, knife-blades, daggers, axes and sickles with toothed blades (Fig. 3.39d).

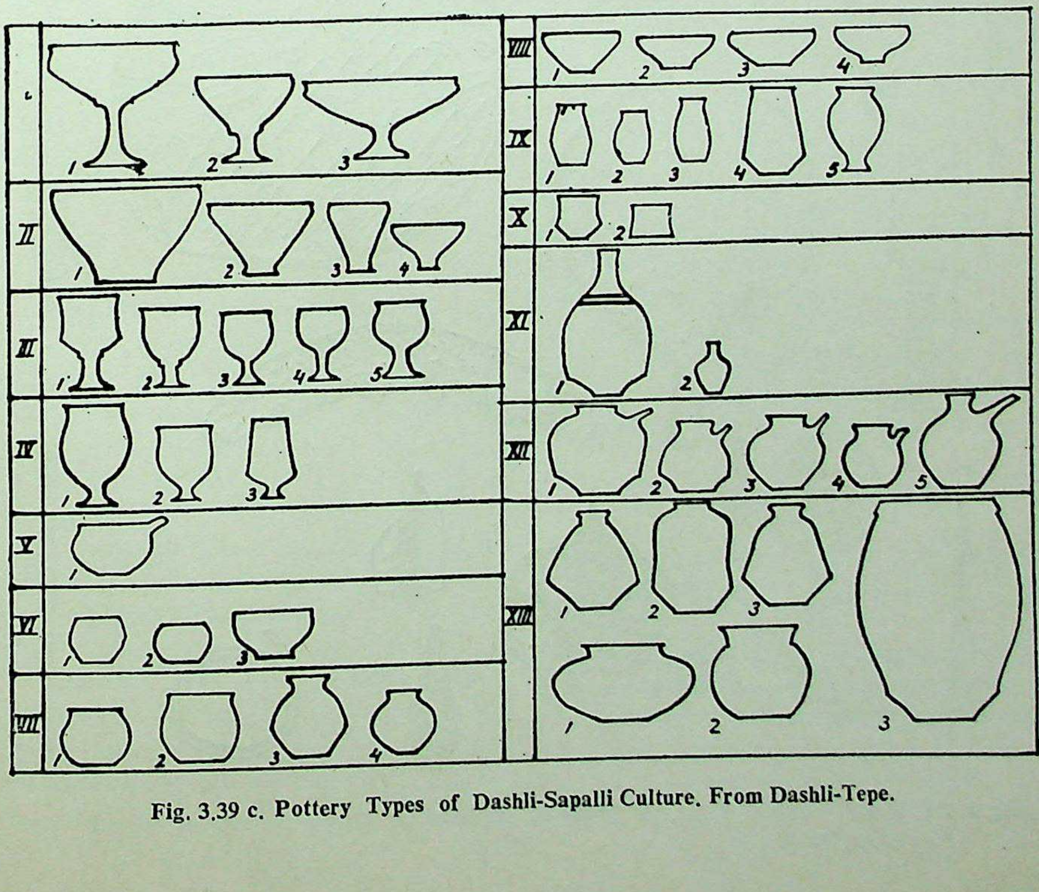

I
1 2 3
II
1 2 3 4
III
1 2 3 4 5
IV
1 2 3
V
1
VI
1 2 3
VII
1 2 3 4
VIII
1 2 3 4
IX
1 2 3 4 5
X
1 2
XI
1 2
XII
1 2 3 4 5
XIII
1 2 3
1 2 3

**Fig. 3.39 c. Pottery Types of Dashli-Sapalli Culture. From Dashli-Tepe.**

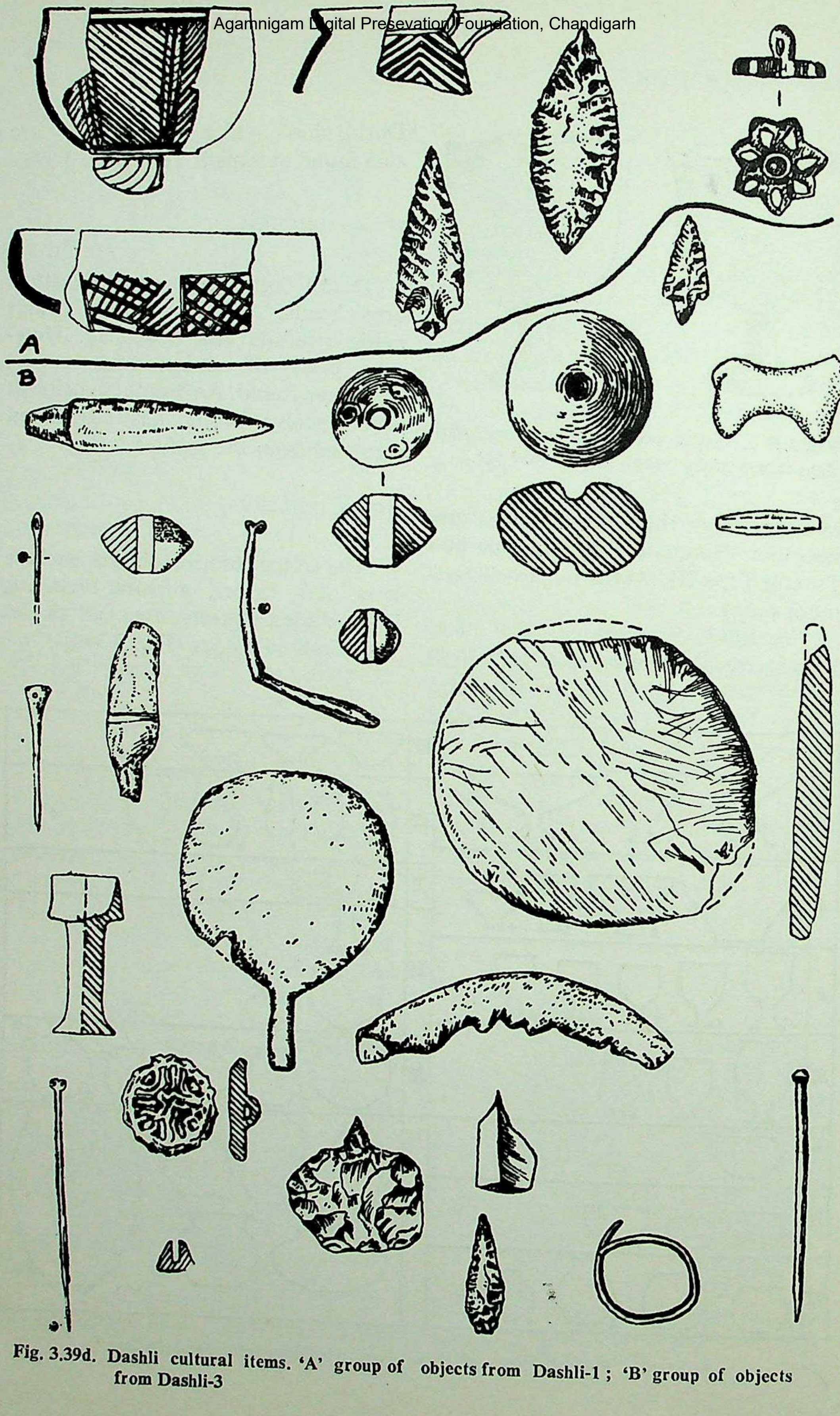


Fig. 3.39d. Dashli cultural items. 'A' group of objects from Dashli-1 ; 'B' group of objects from Dashli-3

Rings made of silver have also been found.

### BONE OBJECTS

Some objects in this category belong to antler and other polished horns. Long needles and points are included in it.

### SEALS

Seals, of stone, bronze and terracotta, found in this complex are usually round with a handle on the back. They are found bearing geometric designs arranged in compartments. (Fig. 3.39d) At least three of the stone seals, on the other hand, have pendants with holes. Two of these bear animal forms and not geometric. One has a scorpion and the other a lion with wings. Sarianidi, the excavator (1971, 34), observes, "Both of them are likely to have been imported and the seal with a lion reminds very much the Assyrian ones dated to XII-X c. B.C."

### WHORLS

Whorls, made of terracotta as well as stone, have been found in good numbers. They are usually biconical, decorated with incised circles on either side. (Fig. 3.39d) Similar examples come from Hissar but it is doubtful if all of them were used as whorls.

It is probably significant to note that men and animal both are seldom represented at Dashli sites. Terracotta plastic art is practically absent.

The overall picture that the cultural assemblage (Fig. 3.39d) mentioned above gives is that of a politically regimented society having connections with areas stretching from northern Iran (Hissar) through south-Turkmenia (Auchin-Depe and Tahirbai) south Uzbekistan (Sapalli-Depe) to north-eastern Afghanistan (Hindukush). It was marked by defensive structures, high-level crafts, economy based on irrigation farming and cattle breeding.

The period to which it belongs appears to be the second half of the 2nd millennium B.C. (Fig. 3.39h).

### SAPALLITEPE

The excavations at Sapalli-Tepe, located near Termez on the Oxus in southern Uzbekistan have been very important for the study of the Late Bronze Age culture of Dashli type in the southern parts of Central Asia. The fortified settlement yielded large defense walls, living blocks, and streets with small houses on either side for individual families (Fig. 3.39 e); one-room house with fire-place was, the general rule. The pottery, buff and red included dishes or bowls-on-stand, jars, dishes, and other pots of very good quality but without painting (Fig. 3.39 f). Beads of carnelian, lapis lazuli, some with axial perforation, are also there. The bronze objects include pins with artistic animal figures and volutes on the top, needles, celts, knives (some with bent blade), daggers (?), vases,

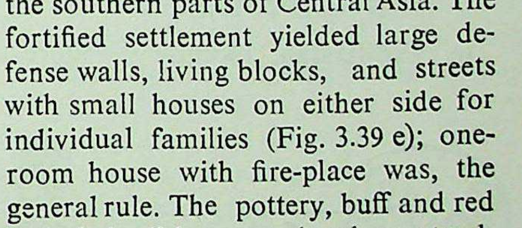


**Fig. 3.39 e. Excavated remains of the fortified township of Sapalli Tepe**

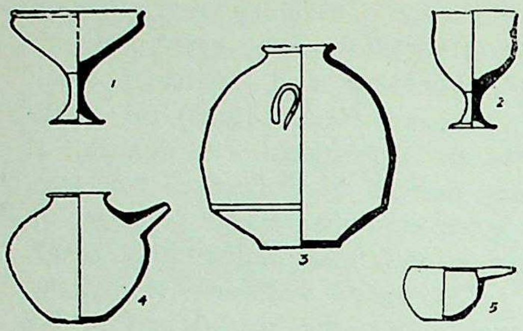


**Fig. 3.39 f. Some pottery types from Sapalli Tepe**

mirrors having handles in form of female figurines sohbut at like those found at Kulli, etc. Fig. 3.39g).There is a chronological division of Sapalli culture; Early, Middle and Late. These are catacomb burials as well as graves below the house-floors.

NEW DISCOVERIES

In Tadjikistan, recently a more interesting site has been excavated : Sarason Tepe. Not much is known about the settlement and the date but it appears that this is a very big agricultural site of the second half of second millennium B.C. and beginning of the first millennium B.C. This is the first Bronze Age settlement located so far in north Tadjikistan and Sogdiana generally. Askarov has excavated some houses, with the fire place. The potsherds are sometime painted with Namazga VI type motifs.

Near Tashkent, the Soviet archaeologists have discovered the remains of the Bugurluk (Bronze Age) Culture. The pottery with a painted ware, and a grey ware with incised designs, is of Kairak kum or Tazabagiab type.

In south Tadjikistan, Vinogradov has excavated one grave-yard of the

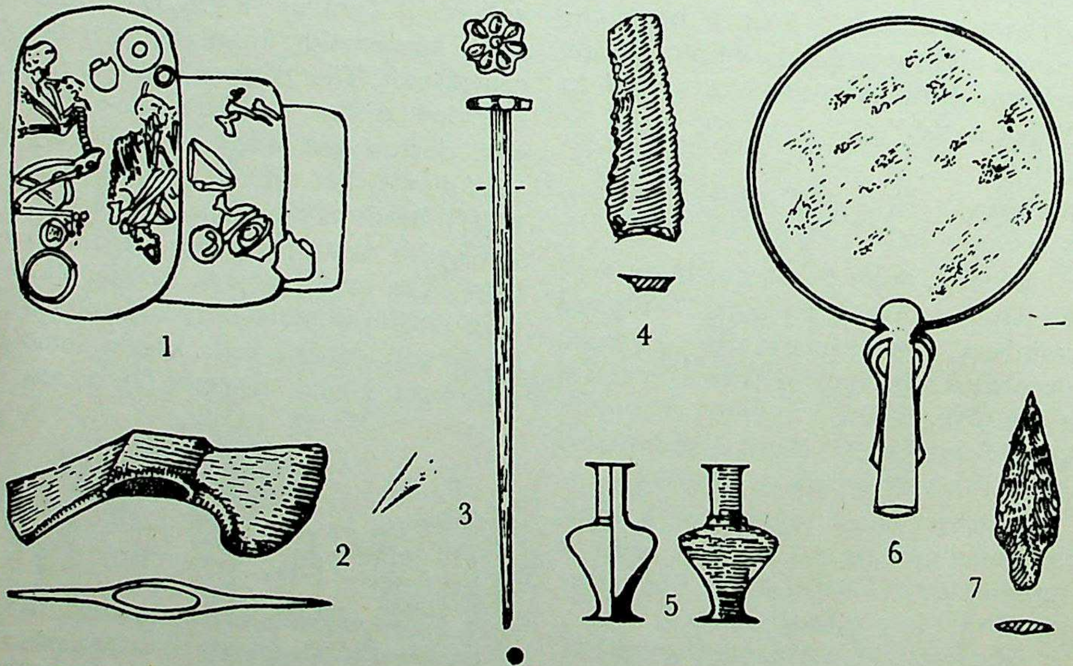


**Fig. 3.39 g. Some Cultural items from Sapalli Tepe : 1. agrave within the habitation with two skeletons ; 2. bronze Adze-axe; 3. copper pin ; 4. flint blade ; 5. copper vessel ; 6. handled copper-mirror of Kulli type ; 7. flint arrowhead**

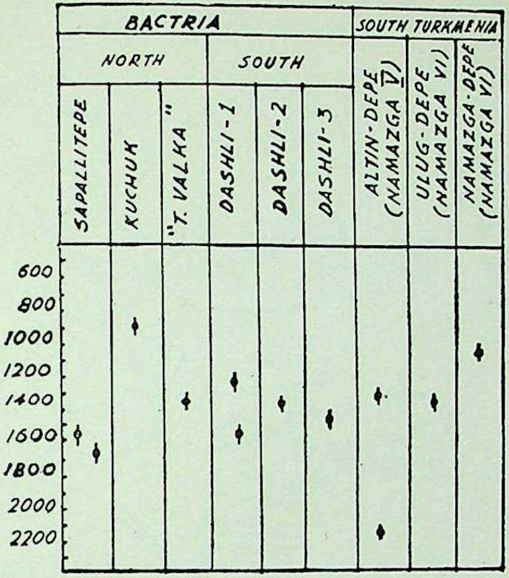


**Fig. 3.39 h.** Chronology (based on $^{14}$C dates) of Late Bronze Age cultures. Highest concentration is between 1600 and 1200 B.C.

Bronze Age at Tandir-Yil, near C. Toursun-Sada. It has yielded some pottery of the Sapalli Tepe type, some anthropological material, and some clay sculptures, for example the figure of a man, half a meter long.

The same explorer has begun this year the excavations at a new settlement, the first in south Tadjkistan, where we have only grave-yards of Bishkent and Vaksh cultures. It is located near the village Kangourt. There are the remains of stone walls of domestic houses, and there is also a rich collection of the ceramics of the Sapalli-type, generally speaking. It is mixed with a few potsherds of the Andronovo (Tazabagiyab) types.

Mrs. L.T. Piankova has also found and excavated a grave-yard near Nurek. It has yielded a very good collection of ceramics which is very clearly of Sapalli type.

Obviously, Sapalli Tepe and Dashli Tepe are not the only sites in south Uzbekistan and northern Afghanistan, *i.e.*, in Bactria, which represent the Sapalli or Dashli Culture. As a matter of fact, there is a big group of Late Bronze Age and Early Iron Age cultures in Bactria and southern Tadjikistan which includes not only Sapalli Culture but also Bishkent Culture, Tulkhar Culture, etc., usually characterized by huge grave-yards and fortified settlements. The culture is known by plain grey and red wares, sometimes decorated with incised designs, and a variety of bronze objects. To that extent, there appears to have been a small admixture of the Andronovo traits of the Khorezm region located near the Aral Sea. There is an element, particularly in the phase belonging to the Iron Age, in which there are the elements of Murgab Culture—Yaz II.

How far this complex was responsible for the Gandhara Graves and the Swat Culture is a moot point, since so far not a single fortified settlement of the Sapalli or Dashli type has been found in the Swat region. Although the pottery is not absolutely identical, yet, it may be noted that some of the types, particularly the beakers, have some affinity with those found at sites like Dashli Tepe, Sapalli Tepe, Tulkhar burial-ground, etc. This similarity has an important bearing on questions relating to the external contacts of the Gandhara Grave people. As will be shown later, the tendency amongst some of the scholars (Lal 1978) has been to connect the Gandhara graves people with the north-western Iranians living at sites like Shah Tepe, Yarim Tepe, Hissar, and sites in Dahistan (Fig. 3.39i). No one need deny a few similarities which do exist between a few

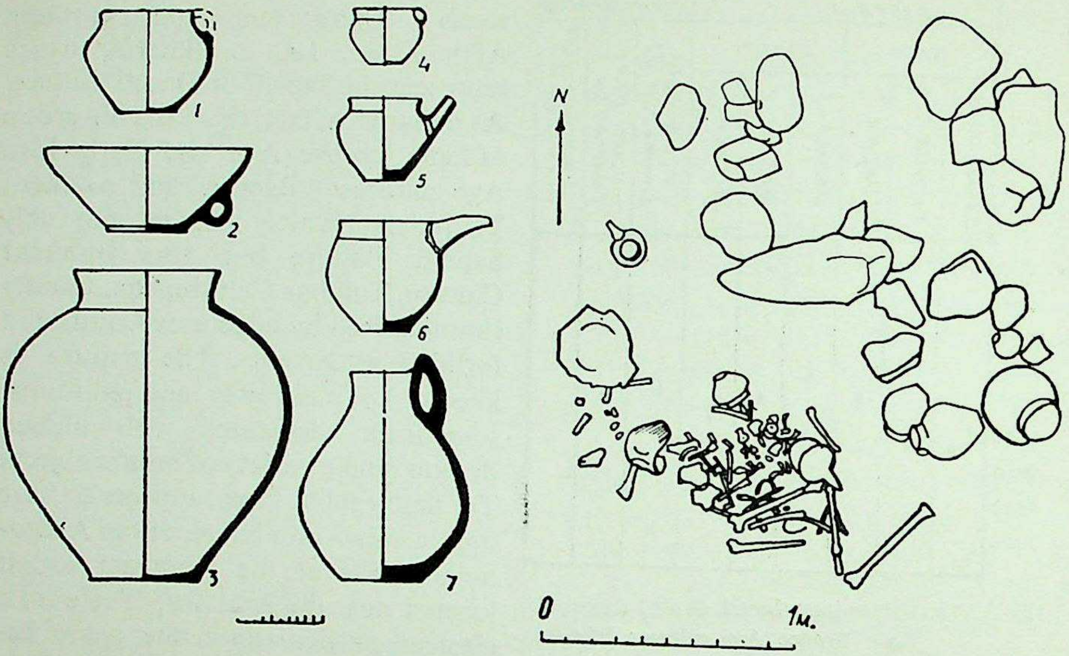


**Fig. 3.39i.** Some pottery types and a grave in Dahistan, north-western Turkmenia

of the antiquities belonging to the two regions but this is true of various other regions and other times. It is so much limited that only 'culture-share' model can be evolved to understand it.

## SWAT CULTURE AND GANDHARA GRAVES

Thanks to the hard labour put in by some Italian and Pakistani expeditions in the region extending from Chitral to Peshawar, we have now the knowledge of the remains of a culture which continued to flourish from *circa* 1700 B.C. to 600 B.C. Dani calls it 'Gandhara Grave Culture', while Gupta (1972, 146) called it 'Swat Valley Culture'. The complete sequence of cultures in this region is best represented by Ghaligai Cave sequence (Fig. 3.40).

It is proposed to present this culture-complex because of two reasons, first, the culture covers most of the 2nd and the first part of the 1st millennium B.C. to which Namazga VI and Yaz I cultures of south Tukmenia and Dashli-Sapalli cultures of Bactria and Burzahom Culture of the Kashmir Valley belong, and secondly, because Dani has given his opinion on two highly controversial issues: first, according to him, the plain grey ware recovered from the Gandhara Grave sites is generically related with the Painted Grey Ware of the Ghaggar-Ganga Divide and secondly, in all probability, the Gandhara Graves represent an early stage of the Aryan settlement in India. The two issues, of course, will be dealt with separately.

To begin with, ever since 1958, when Tucci started exploring the region of the upper Swat basin, primarily for the Buddhist monuments, one after another several sites of the Swat

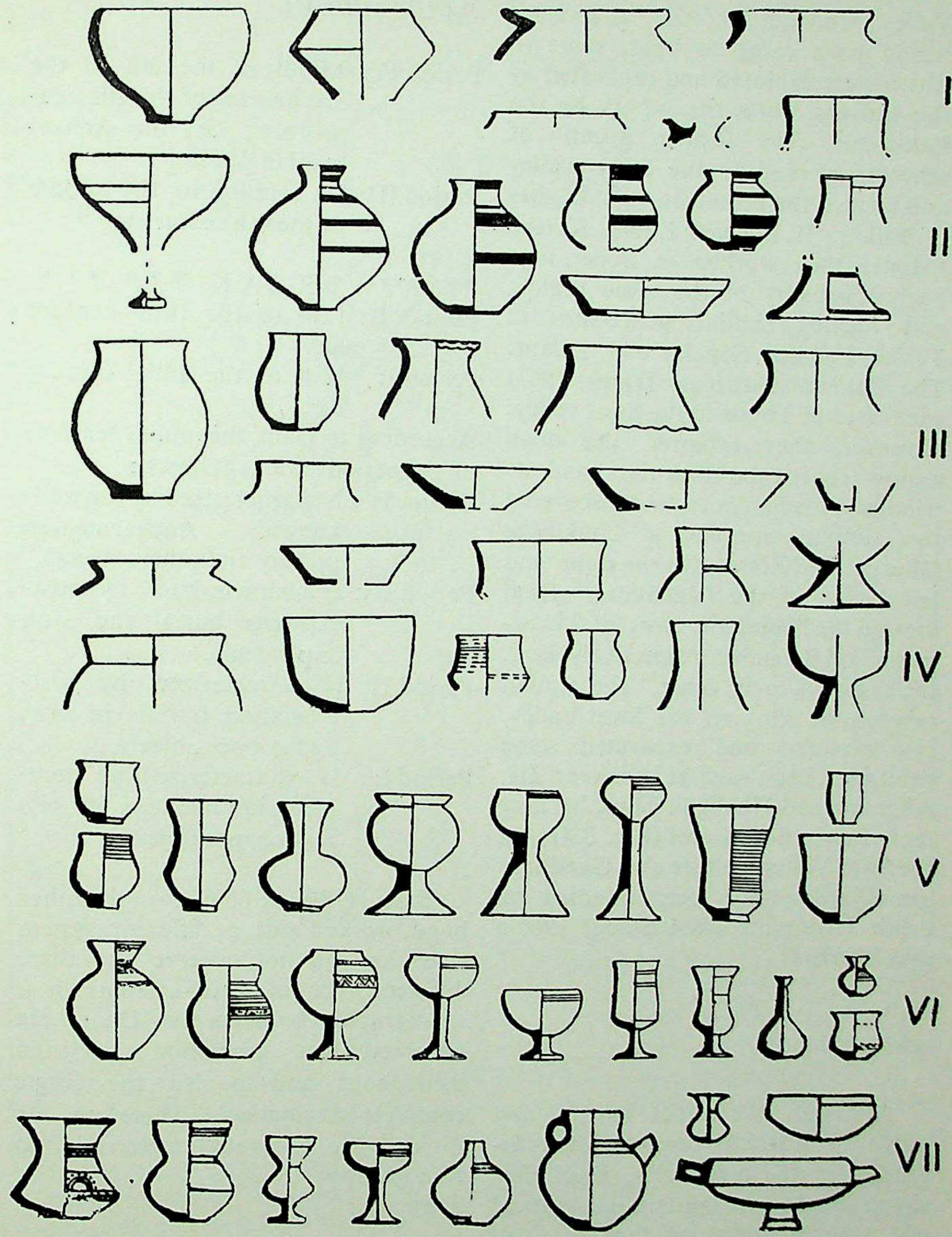


Fig.3.40. Pottery sequence as found at Ghaligai—Level I is the oldest while Level VII is the latest. I (2400—2100 B.C.); II (2100—1800 B.C.); III (1800—1500 B.C.); one $^{14}$C date 1505 B.C.): IV (1700—1400 B.C.); V (1400—800 B.C.); VI (800—400 B.C.); VII (400—300 B.C.) These dates and chronological brackets are extremely tentative and provide only a rough guide. Gandhara Grave pottery types start occurring only from Level V upwards, through Level VII. Some shapes of Level V have similarities with Late Bronze Age Central Asia

Valley Culture in the Gandhara region have come to light, some of which were explored and excavated by the Italians while the others by the Pakistanis. The former group of scholars worked in the Swat valley and located the prominent grave sites of Butkara II, Loebanr I, and Katelai I. Later they worked in Buner, near Pacha, broadly in the same region, and located similar grave-sites at Tarike, Lalbatai, Sogalai and Pulanr. The Pakistani scholars (Dani 1967) excavated at Thana in the Swat valley. However, they explored the doab region between the Swat river and its tributary, the Panjkora, and discovered the similar complex at Chakdara, Gharpat and Ziarat. On the right and left banks of the Panchkora, Dani located the habitation sites of Timargarha and Balambat, respectively. Both the sites face each other. The Italian mission, working in the Swat Valley, also explored and excavated some habitation sites, such as Loebanr III, Aligrama and Ghaligai. Thus, by now more than a dozen sites (Fig. 3.41) of the Swat Valley Culture and Gandhara grave-yards have been studied in depth (Antonini 1963; Stacul 1966 a and 1966 b).

## PERIODIZATION

Although there was hardly any scope for working out correct stratigraphy in the cemeteries, Dani has simplified the whole affair and worked out a stratigraphy on the basis of super-imposition of the graves, some pottery types and metal objects. He proposed the following scheme of peirods (Dani 1967, 48):

*DANI'S SCHEME*

Period IV: Middle of the 6th to the 3rd quarter of the 4th century B.C., *i.e.*, the Achaemenian phase.
Period III: 9th century to the middle of the 6th century B.C.

* * * *** BREAK *** ***

Period II: 12th to the 10th century B.C.
Period I: 16th to the 13th century B.C.

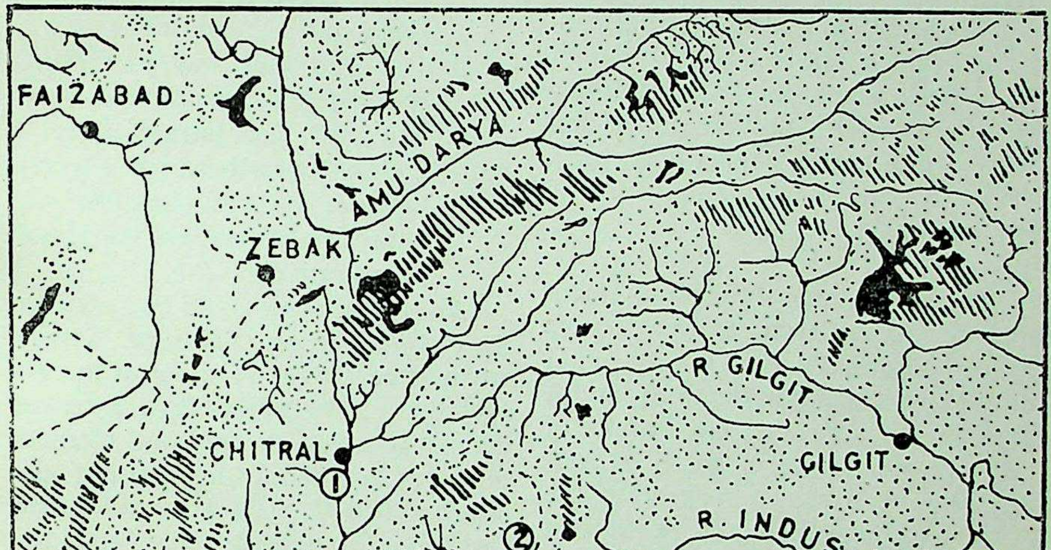
According to Dani, the main features of the periods are as follows :

Period IV : is characterized by the well-known Aachaemenian pottery and other objects.
Period III: is characterized by post-exposure burial and iron implements.
Period II: is characterized by post-cremation burials in urns and copper objects.
Period I: is characterized by complete inhumations in pits and copper objects.

Stacul (1966 b, 66-67), on the other hand, worked out a different system since he did not observe the three different types of burial-customs in a stratigraphic sequence like Dani. He observed that cremation persisted throughout and so also the single complete-inhumation. Therefore, he divided the excavated material into four groups :
They are :

*STACUL'S SCHEME*

AI: Thick ware, *terracotta box-urn*, more cremation, a few single burial and copper.



MAP SHOWING 'SWAT VALLEY GRAVES' SITES

FAIZABAD
AMU DARYA
ZEBAK
CHITRAL
1
2
KALAM
R. GILGIT
GILGIT
R. INDUS
CHILAS
DIR
R. SWAT
3
SAIDU
4
7
6
5
MALAKAND
JALALABAD
MARDAN
PESHAWAR
ABBOTTABAD
SRINAGAR
RAWALPINDI
4000 - 5000 M.
5000 6000 M.
GLACIERS

**Fig. 3.41. Cemeteries are shown by means of numbers inside circles : 1. Noghormuri, Bala Hisar, Tamunak (Chitral Valley); 2. Ushoram, Rashnel (Kalam Valley): 3. Kherai (Gorband Valley, Indus, Kohistan); 4. Loebanr, Butkara II, Katelai (Mingora, Swat Valley); 5. Tarike, Lalbatai, Pulanr, Sogalai (Buner); 6. Thana (Swat Valley, Malkand Agency); 7. Timargarha, Balambat (Panjkora Valley Dir; State).**

(The region between the Amu Darya and the Indus is one of the most difficult terrains of the Indian borderlands. The highlands, temperate, glaciated and with narrow valleys, are still inhabited by tribal groups. Beyond Peshawar no cites as such could be developed in the past).

AII: Thick ware, terracotta '*Visage Urn*,' more cremation, a few single burials and copper.
AIII: Thin ware, a few examples of cremation, multiple burial, and copper.
B: Thin ware, only one example of cremation, multiple burial and single burial, copper and iron.

## THE GRAVES

The graves, except for those intended for children, were prepared more or less uniformally. First of all a round or oval pit, varying in depth, from one to two metres, was dug. On the floor of this pit a smaller rectangular pit was dug, about 1/3rd to ½ a meter deep; the longer axis being normally north-west to south-east. The lower pit was lined with dry stone masonry of three to seven courses. In this pit was laid the dead-body, in the crouched position, or the urn with bones and ashes, accompanied with some offerings. At the end, the lower pit, the actual grave, was sealed with broken stone-slabs, filling the pit with lose earth only. Now the upper pit was filled with the self same earth. On the surface, a circle of stones was arranged to demarcate the grave.

Children were disposed of in the same manner as the adults, but their graves had no upper pit. The grave-pits were lined either by single slabs—orthostats or by dry masonry and were sealed by piled up stones. But no circles of stones were made.

It may be noted that sometimes adults were also buried in the graves which appear to have been originally made for children.

### Modes of Disposal of the Dead

The following modes were adopted to dispose of the dead :

1. The dead body was completely laid in crouched position—one in one grave. It is called 'inflexed single burial'.
2. The dead body was partially or completely burnt and the bones and ashes were buried, either in a globular earthern jar or a rectangular earthern box-like ontainer (Stacul 1966a, Figs. 35 and 34 respectively).

An earthen jar could be plain or the "visage" type. The term 'visage' means face. On the shoulder of the urn eyelashes, nose, mouth and eyes are delineated either by applique method, or by cut method, or by incision and dotting method. The rectangular urns also had a few holes on one of its sides. These were then the post-cremation urn burials.

The burnt bones and ashes were sometimes found deposited in irregular shallow burrowings made in the upper pit.

The dead body, it is surmised, was exposed first to birds and then the remaining bones collected and deposited in the grave pits. This was the 'post-exposure' or 'secondary burial'.

Period III = B: Cremation less, iron, post-exposure secondary burial.
Period II = A III: Cremation more, copper.
Period I = A I+AII: Cremation more, copper.

The periods of Dani and Stacul could be equated as follows :

| *Dani* | | *Stacul* |
|---|---|---|
| Period III | = | Period III |
| Period II | = | Period II |
| Period I | = | Period I |

**Radiocarbon Dates**

From Dani's (1967) report:
Pd. I, on the bones from the (i) 1430± 60 B.C. single grave.
Pd. III, on the bones from (ii) 855± ? B.C. post-cremation burial.
From Stacul's (1967) report :
On the bones from the (i) B.P. is date not given
Post-cremation burials at :
Loebanr I, Tomb No. 21 (i) 1520±150 B.C.
,, Tomb No. 54 (ii) ,, 1030± 150 B.C.
,, Tomb No. 28 (iii) ,, 510± 50 B.C.
,, Tomb No. 87 (iv) ,, 430± 50 B.C.
From seven tombs at Butkara II (v) ,, 464± 40 B.C.

From these dates it is clear that the Swat Valley people started disposing of their dead ceremonially from at least the middle of the 2nd millennium B.C. and continued to do so that upto the 6th-5th century B.C. Ordinarily, it is difficult to think that the cultural milieu associated with these graves will remain constant over such a wide span of time. It is a tittle disturbing to read that "It should be noted though that vases of the same shape, clay and decoration as those found at Loebanr I (1520 ± 150 B.C.) or others with which these types of vases are associated have also been found at Charsada in the strata that Wheeler temporarily ascribed to 6th and 5th centuries B.C." However, basing on the total assemblage, Tomb No. 21 (of 1520 B.C.) has been placed into pd. I, and No. 54 of 1030 B.C. into pd. II (or I).

Stacul's dates are interesting in as far as they have taken back the date of the Cremation Burials to 1700-1500 B.C. Dani's date of 855 B.C. for pd. III graves is also interesting since it has taken back the date of iron right into the gateway of Indian subcontinent to circa 900 B.C. much against the speculations of Wheeler who had placed the introduction of iron in India in 500 B.C.

The last two of these types could be 'multiple' also, *i.e.*, the burnt bones or post-exposure bones of more than one person could be collected in a single grave. In one example belonging to pd. III, two complete bodies—one of male, the other of female, were found embracing each other. They were placed in the 'extended' form.

What is most interesting with these graves is the process of reopening the existing grave, pushing aside the older bones in a corner, and depositing the newly brought dead body or the bones, as the case may have been. Fresh offerings were kept along with the new enterment.

In one example a round port-hole, sealed with a slab, was found on a flat cap-stone of a grave.

Generally, a cemetery was in use for a long time and, therefore, numerous graves have been found cutting each other at different depths.

We may now consider the material remains.

## POTTERY : MAINLY FROM GRAVES

The Gandhara Grave and Swat Valley Culture are characterized by burnished grey ware, although red were is equally present in large quantity (Fig. 3.42). In fact, while the grey ware is uniform in its fine texture, well levigated clay, perfect firing under reducing condition, smooth surface finish and slow wheel product, the red ware is varied in three fabrics:

(a) Coarse or A : hand-made, ill-fired and gritty core :
(b) Medium or B : made on slow wheel, good fired and fine core.
(c) Fine or C : made on last wheel, thin core, red slip.

The types of one ware (grey, for example) are often found repeated in the other (red), although some types are more popular in one ware than in the other.

Painting is completely absent in pottery. The decoration is done either by cordoning or incising linear patterns; usually, these decorations consist of parallel lines around the body.

The pottery types in the grey ware are many and varied but those which are typical and popular may be listed below :

(*i*) *Tall Drinking Vase:* It has several varieties. When the profile differences are worked out, some are found narrow waisted while others are broad waisted; some have carination while the others are round; some are plain while the others are decorated.

(*ii*) *Open-mouthed Drinking Cup with flaring rim* : It is a typical beaker like pot with not so many variations.

(*iii*) *Medium-sized Drinking Goblets:* It is a simple type of pot in the family of tall drinking vases. It has a globular body and plain rim.

(*iv*) *Narrow-necked Bottles* : It has a prominently globular body and narrow neck; the rim is flaring.

(*v*) *Pedestalled Cup* : It is a typical form of a cup on a raised pedestal with flat base.

(*vi*) *Carinated Drinking Cup with flaring rim*: It is also in the family of type 1, and is sometimes decorated with incised triangles.

(*vii*) *Flat-based cup with incurved rim*: It is small in size with comparatively thick wall.

(*viii*) *Bowl with holed legs* : This type of bowl has come only from Thana.

While in periods I and II grey ware was predominent, in pd. III thin red ware became the dominant pottery. Grey ware pots on the whole are characterised by plain simple rim, either flaring or everted, and disc base.

## COPPER OBJECTS, MAINLY FROM GRAVES

*Pins* : They come from the graves of periods I, II and III of Timargarha : 16 are of copper and 1 of ivory. These are of different types; the types are worked out on the basis of shapes of their tops. These may be globular surmounted by flat top, convex top, conoid top, conical top, loop head, pyramidal top. The longest pin is 12·8 cm. in length.

*Toilet objects* : There are two examples, and both came from period II graves of Timargarha. A long stemmed copper object with handled end ending in a hook, the functional end is a small thin blade with both edges quite sharp.

*Pendants* : One (of copper) is crescent shaped, and the other (of bone) is rhomboidal. Both come from pd. III graves of Timargarha.

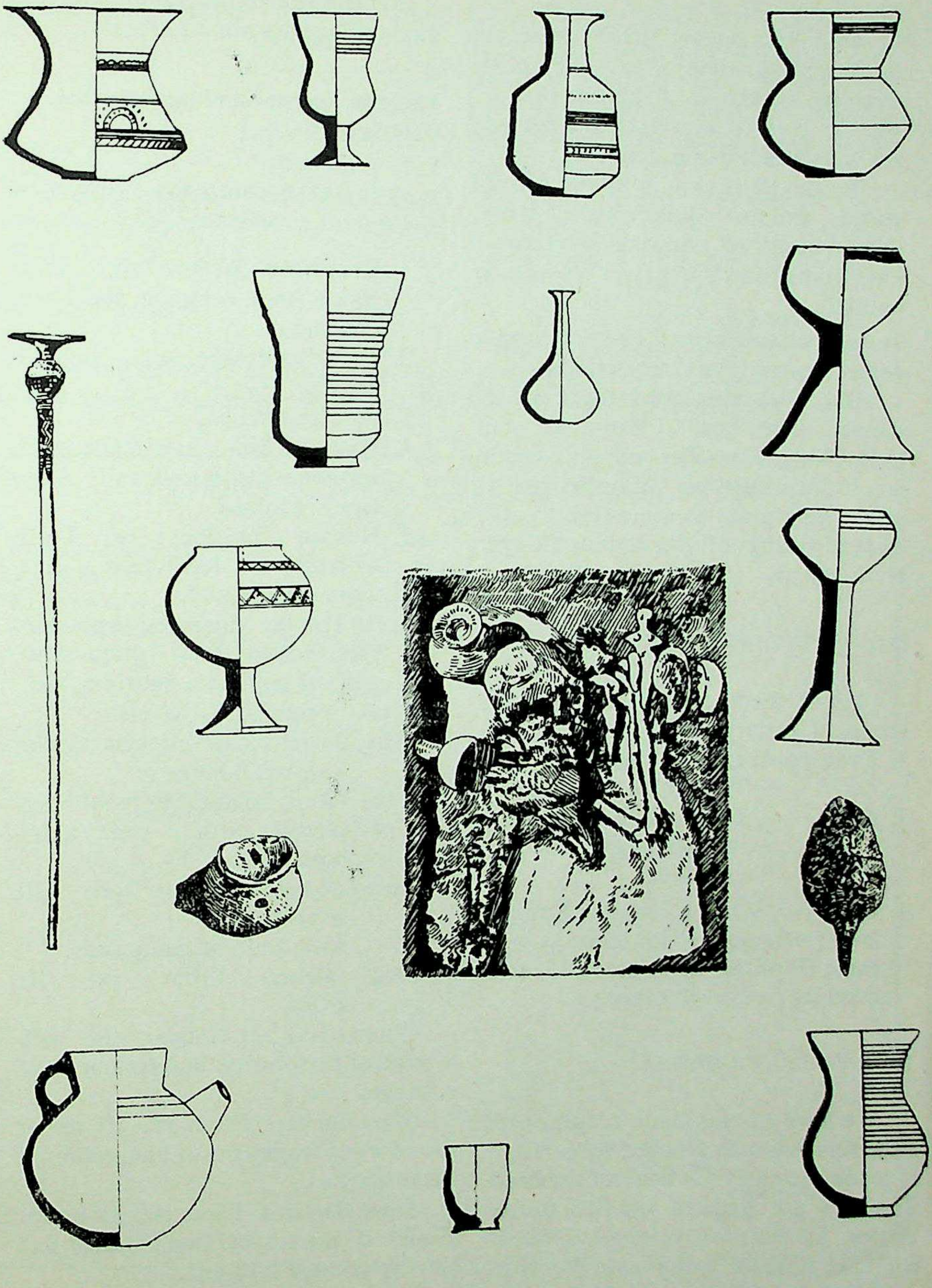


Fig. 3.42. Swat Valley Culture-Complex. Pottery, metal objects and a grave

*Finger ring:* Four are of copper, two of gold and one of silver, these are made of thin coiled wire. They come from pd. III graves of Timargarha.

*Needle:* It is of eye-type; the eye was made by bending the stem end.

Besides these two antimony rods of copper, and two other rods of ivory, several beads of semi-precious stones have come from the graves of pds. II and III.

*Terracotta net-sinkers* : This implement comes from all the three periods.

Stacul has mentioned the finds of copper arrow-heads, harpoons and knife-blades also. The copper harpoon is not illustrated so far otherwise it might have given us some clue to our understanding of the Indian Copper Hoards also.

### IRON OBJECTS FROM GRAVES

All of them come from pd. III graves of Timargarha.

1. *Spear-head* : Leaf shaped, no mid rib.
2. *Nail*: With thick circular top.
3. *Spoon*: The handle terminates in two rings, one on each side.
4. *Cheek-bar, horse's harness* : Straight bar (rectangular in section) with three elliptical holes made at equal distance from each other.

### TERRACOTTA FIGURINES

We have a hand-made red-coloured male figurine with pinched face. There is a depression at the back of the head. The eyes are marked by two dotted circles. He is shown wearing a *Chhannavira, i.e.*, thread going round crosswise on both the shoulders.

Some more terracotta animal and human figurines are also found.

### Material Equipment of the Balambat Habitation Site

*Terracotta objects from different levels of period III :*

1. Ram-head : With red slip coating. Black lines decorate the horns and snout.
2. Cat : handmade, with pinched mouth.
3. Horns : One pair.
4. Humped Bull : handmade, with applique hump and tail. Front legs are joined.
5. Human figurines : (a) Torso with pinhole decoration indicating necklace, red.
   (b) Human figurines, with pinched face and arms, grey. Also, stylized miniature figurines, red.

*Beads* : From pd. III levels.
   (a) Barrel-bicone-circular with wide axial-hole.
   (b) Whorl beads. Short-cylinder-circular with a wide axial-hole.

*Ivory Objects* : From pd. III levels.
   Awls and antimony rods.

*Shell Objects* : From pd. III levels.

Concavo-convex circular disc with a central perforation and fragment of a bangle.

*Glass Objects* : From pd. III upper levels. Four fragments of blue coloured glass bangles.

*Stone Objects* : From pd. III levels. Finished ring stones. One polished axe having pointed butt-end.

*Iron Objects* : From pd. III levels.

Only four objects:
1. On blade of a knife,
2. Three fragments of nail,
3. Finger ring of rounded wire.

From pd. IV come several iron objects, but are outside the scope of the present study.

**Structural Remains**

Nothing definite has come from the lowest levels of Balambat which could be attributed to period I. Even in the pd. II levels there were only four post-cremation burials. Some definite structures appeared only in pd. III, although these two were found much destroyed by pd. IV people.

Three types of structures appeared in pd. III :

(i) Fragmentary walls of rubble stone masonry.
No plans could be made out.

(ii) Circular or rectangular store-rooms were found lined with rubble stone masonry.

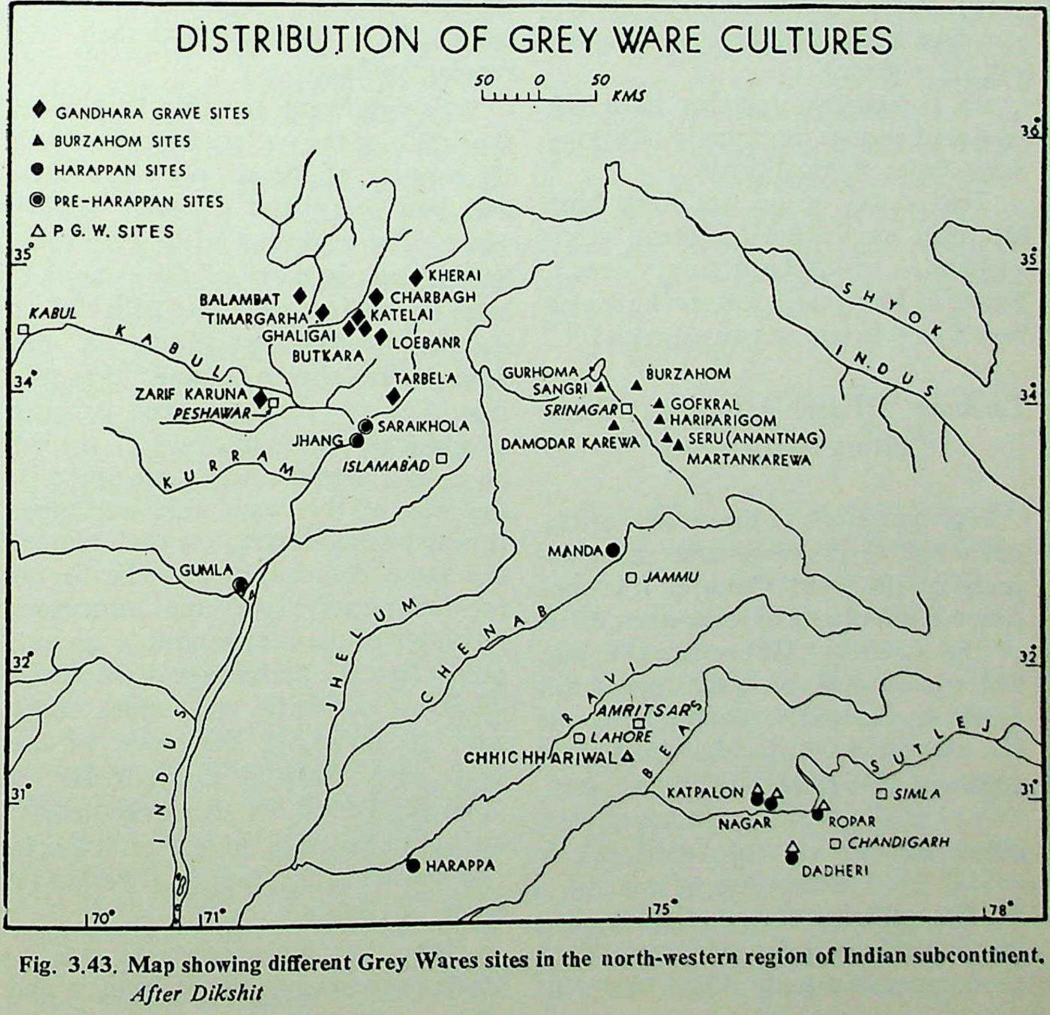

DISTRIBUTION OF GREY WARE CULTURES
50 0 50 KMS
◆ GANDHARA GRAVE SITES
▲ BURZAHOM SITES
● HARAPPAN SITES
◉ PRE-HARAPPAN SITES
△ P. G. W. SITES
35°
34°
32°
31°
36°
70°
71°
75°
78°
KABUL
KABUL
BALAMBAT
TIMARGARHA
GHALIGAI
BUTKARA
KHERAI
CHARBAGH
KATELAI
LOEBANR
TARBELA
ZARIF KARUNA
PESHAWAR
SARAIKHOLA
JHANG
ISLAMABAD
KURRAM
GURHOMA
SANGRI
SRINAGAR
DAMODAR KAREWA
BURZAHOM
GOFKRAL
HARIPARIGOM
SERU (ANANTNAG)
MARTANKAREWA
SHYOK
INDUS
MANDA
JAMMU
GUMLA
JHELUM
CHENAB
RAVI
BEAS
AMRITSAR
LAHORE
CHHICHHARIWAL
INDUS
SUTLEJ
KATPALON
NAGAR
ROPAR
SIMLA
CHANDIGARH
DADHERI
HARAPPA

Fig. 3.43. Map showing different Grey Wares sites in the north-western region of Indian subcontinent.
*After Dikshit*

(iii) Underground pits having rubbish yielding animal bones, ash, pot-sherds, etc.

Two rooms could be detected. Walls were mud-plastered.

**Physical Types**

Bernhard, the anthropologist who worked out the details of the physical types of the dead buried in Timargarha graves, identified two types :

(i) *Proto-Europoid*: It is the dominant type in the inflexed burials (pd.III of Dani).

(ii) *Mediterranean*: It is the dominant type in the post-exposure burials (pd. III of Dani).

Pd. II cremated remains have not produced enough material for working out definite physical types.

Two skulls of pd. III have been identified as Veddid (different from Veddoid, proto-Australoid, etc.). Traces of Mongoloid features have also been found in one or two examples.

## Loebanr III and Aligrama : Swat Culture Settlements

For purposes of our study of the Burnished Grey Ware and other aspects of the Swat Culture, it is considered important to know the details of the Loebanr III settlement site which is located on a flat-topped hill on the banks of the Jambil river. It was excavated by Stacul and others in 1968 and 1976 (Stacul 1977).

### LOEBANR-III

The settlement is marked by pit-dwellings yielding the grey ware which as comparable with that recovered from period IV levels (1700-1500 B.C.) at Ghaligai. The deep broad pits, about 8 m in diameter and 2 to 3 m in depth, oval in shape, were cut in the natural soil. On the floor were found the remains of fire-places, pots and other objects. Along with these pits, barren and beehive shaped pits for storage, the largest measuring 2·60 m wide and 2·85 m deep, were also found in the settlement. Some were medium sized also; and or oval and round in plan. Significantly enough, around some of the dwelling pits a few post-holes were found. When seen in the light of daub fragments with reed marks, it is surmised that they had regular roofing.

It is significant to note that more than 50% of the pottery from Loebanr III consists of handmade black, grey and buff burnished wares, usually vases. The brown to gritty grey ware has yielded, in most of the examples, large to medium sized jars with ribbed rim and basket-impressions on the base. It has also to be noted that less than 3% of the ceramics consists of black-on-red painted ware turned on a fast wheel since in all probability pots of this ware were imported. It may be mentioned here that almost the same description may be found for the pottery from the Burzahom Neolithic of the contemporary period, except that the percentage of imported black-on-red ware was much more low. As far as the anscestory of the grey gritty ware at Loebanr III of Ghaligai Period IV is concerned, it should be borne in mind that it lies in the similar ware found in Period IV levels of Ghaligai.

The other finds from this site include copper implements, human and animal terracotta figurines, polished objects of bone, stone celts and jade beads, the last named object may have come casually from China as the crescent shaped and rectangular stone-reapers with two holes at Burzahom also appear to have come from the same source. It may, however, appear that after Period IV of Ghaligai contacts of the Swat Valley with China were snapped, though not with Iranian plateau.

The faunal remains consist of a very small percentage of wild species like tiger; by and large, pigs, sheep and goats predominated. There are seventeen species of domesticated ovine and bovine animals, including the horse, zebu, dog, etc. (Campagnoni 1977).

The cultivation of wheat, barley, lentil, rye, pea, rice and grape was widely practised, although barley appears to have been more popular than wheat and rice both (Costantini 1977). Barley has yielded three varieties—*Herdeum vulgare* (hulled barley) *Hordeum vulgare Var Nudum* (naked barley) and *Hordeum spontaneum*. Wheat has only one variety—*Triticum sphacrococcum* but rice has two—*Oryza sp.* and *Oryza*.

### ALIGRAMA

About 4 km. away from Loebanr III, in the same central part of the Swat Valley, we have another very important settlement of the same culture—Aligrama. The sequence of cultures from 1200 B.C. through 400 B.C. and flora & fauna remain almost the same as at Loebanr III. The site was occupied during a late phase of period IV of Ghaligai sequence (Tusa 1977). In fact Period IV marks the sedentary phase of a developing culture. During Period IV many permanent settlements cropped up, such as Barikot, Aligrama, Loebanr III and, possibly, Ghaligai. Barikot has been excavated by Stacul in 1977. In Period IV have been found houses made of mud and pebbles, bone beads, bone decorated pins, two to three pieces of copper, etc. It is significant to note that once the people established themselves permanently in sufficiently large villages of Period IV, they started thinking about the life after death in a very pronounced manner. The Gandhara graves, by and large, belong to Period V and VI as the comparative study of pottery, and a few $^{14}$C dates would suggest, although it may have lingered on till period VII. Besides the typical burnished grey ware, as found at Loebanr III, Aligrama yielded the same type of fauna and flora. Aligrama has, of course, yielded kackberry (celtis) also.

## PLAIN AND PAINTED GREY WARES : A DISCUSSION

The plain grey ware with cordened or incised decorations of the Gandhara grave has been visualised by Dani as closely related with the Painted Grey Ware of north-western India. According to him the P.G. Ware family is found widely distributed in Western Asia and Central Asia as well as north-western Pakistan. It could even be present in western Punjab. The change from plain to painted ware is the change not of the ware fabric, clay, firing, etc., but simply of the addition of paintings. This could have occurred in Punjab where painted pottery tradition existed much before the emergence of the P.G. Ware.

The suggestion is, however, purely hypothetical, and at the present state of our knowledge, suffers from two very big drawbacks.

First, the shape, size and typology of the Gandhara plain grey ware and P.G. Ware have not been even touched in this attempt of correlating the two wares. It may be stated that fabric, firing, clay, etc., belong to the generalized group of technological aspects of pottery making. They can be considered only as supporting arguments to establish the theory of contacts. The basic cultural pattern of a group of people, when seen in terms of pottery, takes into consideration shapes and decorative designs. These may be evolved, modified or accepted, but always assume a group pattern and thus exhibits a definite individuality. If shapes and docorations are not considered then mere similarity in the generalised technological traits have little meaning. *Thus, as things stand at present, there is absolutely no typological similarity between the plain grey ware of the Gandhare Graves and Swat Culture and the Painted Grey Ware. Similarly, there is absolutely no similarity between the incised and applique designs of the plain grey ware of the Gandhara Graves and Swat Culture and the painted designs of the Painted Grey Ware.*

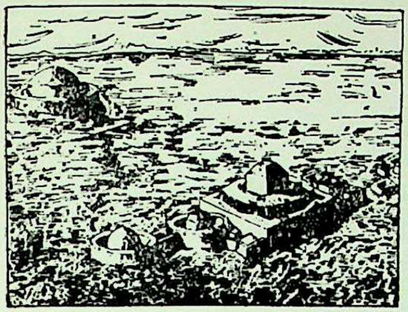
Secondly, although it is true that there was the long tradition to decorate the pottery with paintings before the P.G. Ware in the Punjab and Haryana, the evidence of plain grey ware of the Swat Culture coming into touch with any pre-P.G. W. painted ware is not there. Nor there is any evidence to establish the similarity or identity in the painted designs of the P.G. Ware with any other pre-P.G. painted wares.

In the present stage of our knowledge, therefore, the two wares stand absolutely apart and the hypothesis of Dani regarding their generic relationship is completely unfounded. The desideratum would be the exploration of western Punjab which the Pakistani archaeologists should undertake at an early date. This is imperative because in eastern Punjab we have already established the existence of Painted Grey Ware in the border districts of Amritsar and Gurdaspur, but the plain grey ware of the Gandhara Graves and Swat Culture has not been reported even up to these districts what to say of further east. In fact, the grey ware associated with the Gandhara Graves does not at all seem to have crossed the Indus. On the other hand, purely from the point of view of the Painted Grey Ware, Lal's supposed identification of the P.G. Ware sherds in the Stein's collection of pottery from Siestan (Lal 1955) still stands in isolation, a state of affair that is inexplicable. In fact, several year's excavations at Shahr-i Sokhta has not yielded to the excavator, Tosi, even a single P.G. Ware sherd. Further, the cultural contact between the P.G. Ware settlements and the Gandhara or Swat Culture settlements through the minor antiquities, or the pattern of buildings, or the modes of the disposal of the dead is also difficult to establish in the present state of our knowledge.

"Swat Valley was in the IV Period involved in a cultural circuit connecting almost all the north-western part of the Indian subcontinent from Kasmir to Northern Pakistan and also with indirect relations with China.

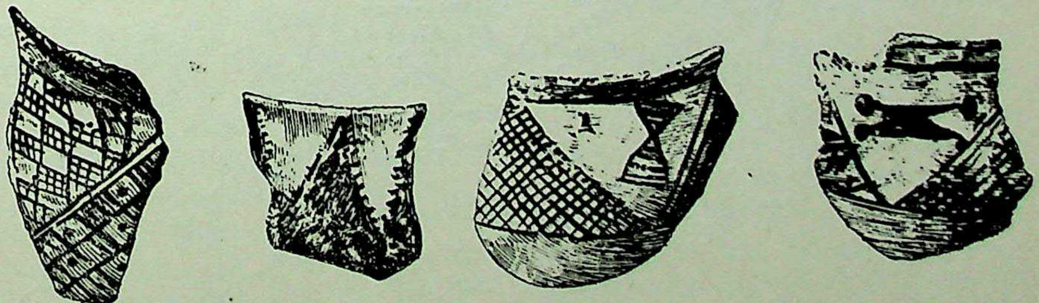
With the beginning of the so-called "grave culture" we have a progressive process of segregation so that in the V period there are some typological relations with north-western Iran (Hasanlu V) and Bactria (Dashly-3). During the mature phase of that culture in the VI period of the Swat Cultural sequence, we have an almost complete isolation of the valley. Unique relations are with Dir and Peshawar area where latest excavations revealed the presence of the same culture.

The end of this period of isolation is with the beginning of the Murya Period when southern incentives influenced the culture so that the valley was included in a new cultural and economic circuit whose centres were Charsada and Taxila when it became more integrated to the rest of the Buddhist World" (Tusa 1977). This appears to be true.

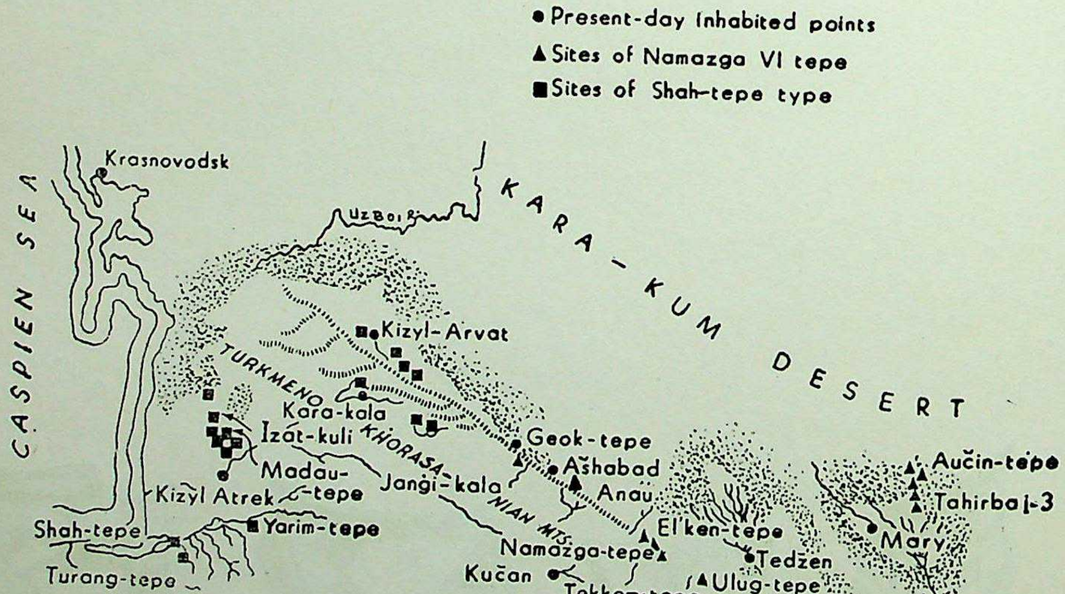


# THE EARLY IRON AGE

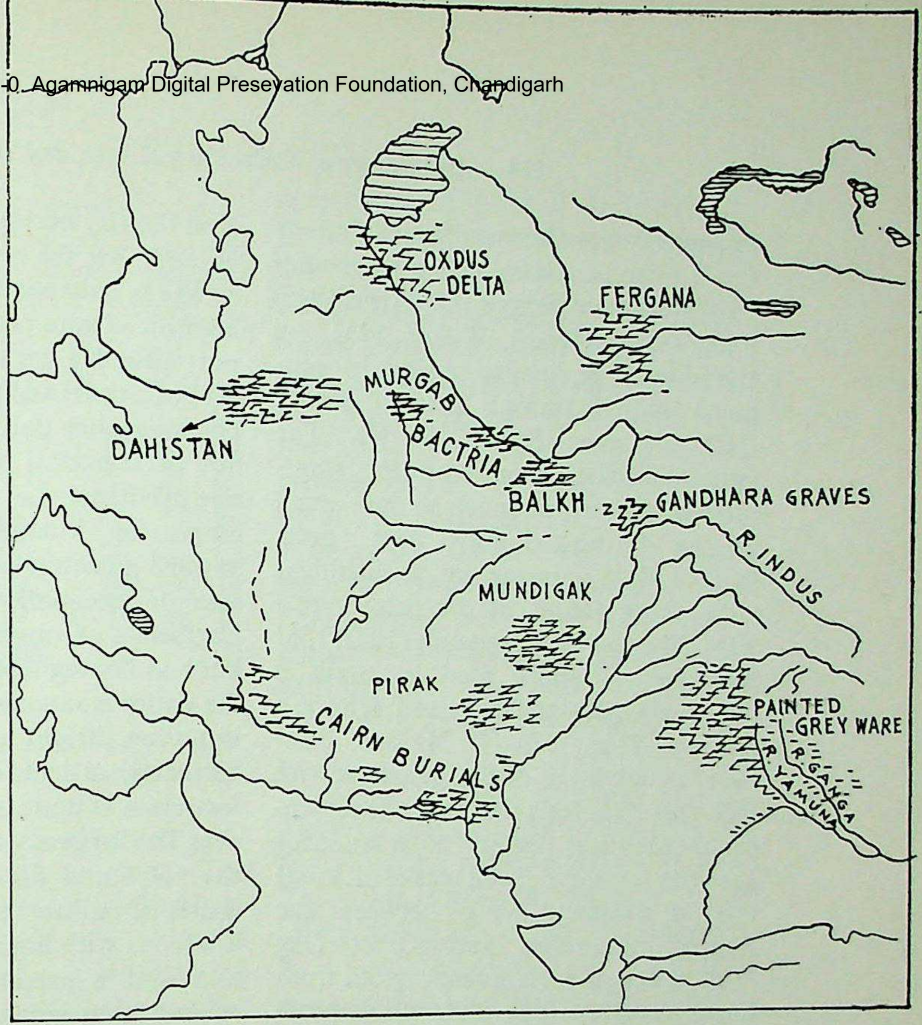
S.4.1 ↑
S.4.2 →



S.4.1=Burial monuments of Early Iron Age at Tagisken, Khorezm
S.4.2=Early Iron Age pottery of Yaz I type from Ulug-Depe


● Present-day Inhabited points
▲ Sites of Namazga VI tepe
■ Sites of Shah-tepe type
Krasnovodsk
CASPIEN SEA
UZBOI R.
KARA-KUM DESERT
Kizyl-Arvat
TURKMENO-KHORASANIAN MTS.
Kara-kala
Izat-kuli
Madau-tepe
Kizyl Atrek
Shah-tepe
Yarim-tepe
Turang-tepe
ELBURS
Tepe Hisa
Jangi-kala
Geok-tepe
Ashabad
Anau
El'ken-tepe
Namazga-tepe
Kučan
Tekkem-tepe
Ulug-tepe
Tedzen
Altyn-tepe
Meshed
Serahs
TEDJEN R.
Aučin-tepe
Tahirbaj-3
Mary
MURGHAB

S.4.3. Map showing Late Bronze Age and Eearly Iron Age sites



S.4.3a. Map showing different groups of Iron Age cultures.

THE change from the Bronze Age to the Iron Age in Central Asia was somewhat sudden. It appears to be in the nature of some kind of infiltration of a highly regimented social-order in a basically flexible society of the semi-sedentary character of the Late Bronze Age. As a matter of fact, on certain occasions new areas were colonized, and citadels and lower towns were established in a most elaborate manner. Although opinions differ on the very vital issue of the orignal home of the people responsible for it, nevertheless it is generally agreed that at least some of them came from northern Iran. If it were so, their main thrust should have been felt in western part of south Turkmenia. And according to Sarianidi (1971), it appears to have been so.

In south Turkmenia, newcomers seem to have preferred three regions: (a) the Dahistan, including the Misrian plains, also called Turkmano Steppe, located on the south-eastern shores of the Caspian Sea, (b) the submontane area of the Kopet Dag hills, and (c) the Murbag river delta (Fig. S. 4.3).

### Dahistan Group

It includes sites located not only in the Misrian plains but also in the hilly tracts near the modern towns of Kizil Arvat, Bami and Beurme (Ganjalin 1953; Masson 1956). In the basin of river Sumbar also a number of small village settlements, of about an acre each, have been found (Fig. S. 4.3a). Since this was the most thickly populated area of the Early Iron Age, it appears to have been colonized first by the Iranian people emerging from sites like Shah-Tepe (Sector IIa) (Arne, 1945), and Tureng-Tepe (Wulsin 1932) in the immediate vicinity or slightly eastward located Iranian sites of Hissar (III) and even Tepe Giyan (I). The surmise is based largely on the similarity of pottery, so much so that some of the burnished grey ware pots, largely plain, appear to be identical with those found at the former two sites. Masson and Sarianidi (1972, 156) see their parallels even in Sialk B (Cemetery), Kalar Dasht and Khurvin pottery. Tosi (1973-74, 74) has, however, struck a not of disagreement with this view. He feels that this phenomenon of identical pottery is 'a tendency towards intensive exchanges of all kinds over a territory lying between the Zagros mountains and Kopet Dag than aphenomenon spreading out from Iran, a region that after all appears less advanced and populated than Dakhistan.' Masson and Sarianidi (1972), however, still feel that Dahistan sites were emerging under Iranian population-shift and that could by no means be the products of only isolated groups which remain content in a small geographical area. In course of time they are supposed to have moved along the submontane zone and reached the Murgab delta. But before this happened it appears, according to the two authors, that they consolidated their man-power and settlements in Dahistan. But how they did it? Just by establishing a few storng-holds or something else also on social plane?

At Izat Kuli, Madu-Depe, Chialyk-Depe and Tangsikildja, their cities spread over 100 or more acres; at Izat Kuli the city occupied about 135 acres of land. But the coverage in terms of acrage is only one aspect of the consolidation of man power, still more important is the introduction of the concept of citadel and fortress in the town-planning since that implies the formation of temporal authority on exclusive privileges. Let us take up the example of Madu-Depe. The rulers selected a central place in the desired area of occupation, erected a high platform of mud-bricks, and then built an impregnable fortress over it, the entire monument recaching to the imposing height of about 1·35 m. Similarly, at Izat Kuli a pentagonal fortress was built in the centre of the site. The fortress was the actual seat of the ruler and his aids. It was the centre of political power. Cities of this kind, *i.e.*, with high density of population and a privileged class of rulers, cannot keep going unless a constant food-supply is assured. The process of intensive agriculture or else the ability to mobilize sufficient agricultural produce for redistribution goes hand in hand the process of urbanisation. For intensive agriculture in oases artificial irrigation is a must. And this was achieved by digging long channels. Both near Izat Kuli and Madu-Depe such channels, possibly emerging from the River Atrek, have been detected upto 50 to 60 km. in length. They are dated to early first millennium B.C.

Agriculture was, of coure, supported by stock-breeding and fishing, and hunting, as is usual with all developed urban societies.

Here we are dealing with an economic system in which metallurgy also played a very important role. But, to

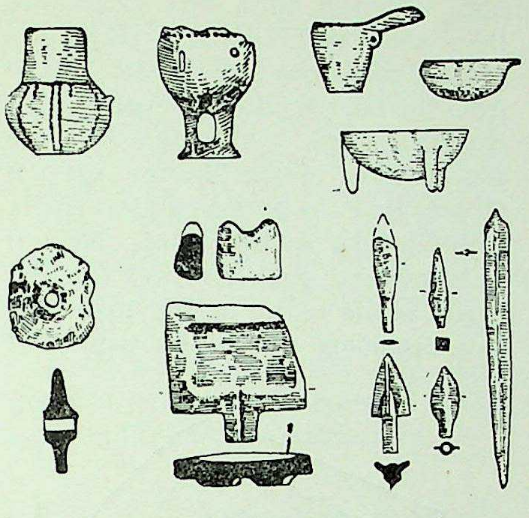


**Fig. 4.1. Pottery, clay, stone and metal objects from Dahistan sites of Early Iron Age**

begin with, not iron, so much. In fact, iron is represented only by slags. The situation is somewhat similar to Hastinapur (Painted Grey Ware levels) in India where iron was encountered only in slags In Dahistan sites, howeever, moulds of stone for tools and weapons have also been found. The tools and weapons found so far in Dahistan were, therefore, found made largely of copper and bronze: the arrowheads, for example, plain leaf shaped and tribolate types, sometimes with solid tangs and sometimes with hollow tangs, *i.e.*, socketed (Fig. 4.1). At Madu Tepe a long sword with strong medial ridge has also been found. But what is still more interesting is the continuance of stone objects, such as flint blades for sickles and sling stones, querns, pounders and grind-stones. These were, of course, their domestic tools. A unique sacrificial stand of stone—square table with short legs and a spouted drain emerging from a square hollow—has also been found (Fig. 4.1.) In India closest parallel to it are the similar, though generally round, pedestals made for Siva-lingas.

Pottery, as said earlier, was wheel-turned and grey, often highly burnished, but sometimes black-slipped. A small percentage of red and light green wares has also been found. They include some characteristic types which south Turkmenia saw for the first time, such as the footed bowl, the beaked sieve with holes in the bottom, spherical bowls on hollow pedestals decorated with cut-work, and globular jugs with tall neck, short lugs on the shoulders and ribbed profile (Fig. 4.1).

One of the major problems of the Dahistan Culture that still remains unsettled is the chronological gap, of a few centuries, between the end of Shah Tepe, the supposed original home of the Dahistan Culture, and the beginning or Madu-Depe or Izat Kuli. Masson and Sarianidi (1972, 158) feel that some of the still unexplored village sites in the Gorgan valley may be older than the city sites of the Misrian Oasis and they hold the key of bridging the gap. On the very face of it there appears to be something wrong somewhere. Either the chronology based on uncorrected $^{14}$C dates is to be rejected or else the graphic description of Iranian troops marching from Dahistan to Murgab delta is more imaginative than real. And to that extent Tosi may be right since exchanges between north-western Turkmenia have always been there in history, right from the Djeitun Neolithic times. But then the question which has not been satisfactorily answered by Tosi also is the sudden emergence of highly regimental societies in Dahistan which has so far been, right from the Neolithic times, a culturally backward area. It was no more than a corridor. It is purely academic to state that 'the very complexity of this cultural unit points to a long period of formation *in locco*.........it is likely that the archaic Dahistan Culture was gradually formed on a platform of cultural elements that were common to both Gorgan and southwest Turkmenia' (Tosi 1973-74, 75) because-underlying this observation is the present day tendency of scholars to talk in terms of anti-diffusionist models. In fact, we still do not know enough of archaeological remains of this region to pass such judgements.

## Kopet Dag Group

While Misrian plains were developing a culture with its characteristic plain burnished grey ware, high fortresses, and iron/bronze technology, the Kopet Dag submontane zone was developing an almost similar kind of culture but with a different kind of pottery : the handmade painted pottery of a type not known in this region earlier but which shortly became popular even in the Murgab delta. That the two groups were not entirely different from each other may be easily made out by the occurrence of citadels of the Misrian type in the Kopet Dag region. At Anau itself, a small settlement of this culture came up on the southern mound. It is represented by the top-most levels of the Period IV of Pumpelly's scheme. An iron sickle from this site has been considered by experts as the oldest iron implement of Central Asia (Masson and Sarianidi 1972, 160). But there are larger sites also, covering more than 25 acres of land, such as Elken-Depe (Kachuris 1967; Marushenko 1959), some 15 km. from the famous Bronze Age site of Namazga-Depe. Although the place was occupied in the Bronze Age yet at that time the settlement was small, covering just a few acres. Now it sprawled and gave rise to a fortified citadel in the centre of the township, thus becoming the oldest capital of

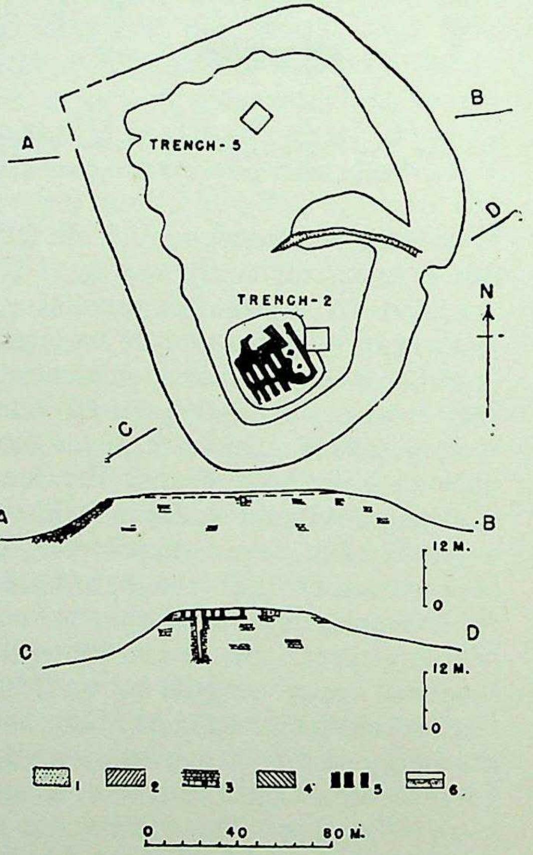


**Fig. 4.2.** **Yaz Tepe 1. Plan and Section.**
*Symbols* : **1. Cultural layer,**
**2. Clay layer,**
**3. Mud-brick facing,**
**4. Mud bricks (collapsed),**
**5. Mud walls,**
**6. Alluvial layer.**

north Parthia, dating back to 1200 B.C. or so.

Elken-Depe had a supporting town in Ulug-Depe (Sarianidi 1969) located in the eastern most region of the submontane zone. Here also the story was the same : established in the Bronze Age and developed in the Early Iron Age. However, so far the citadel, if any, is missing.

There were other sites also, but they were at best the village sites which supported the cities economically.

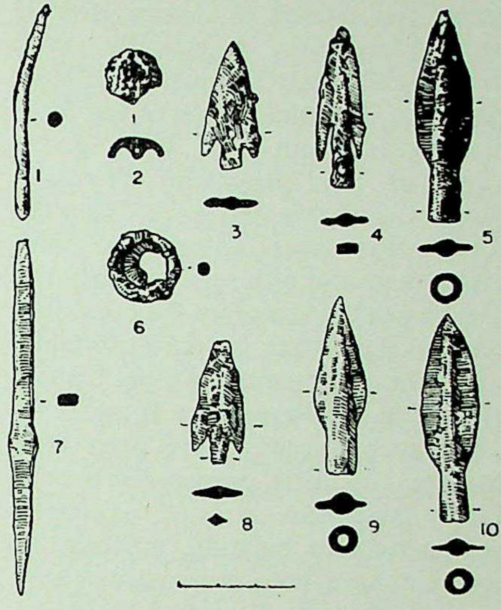


**Fig. 4.3. Yaz-Depe 1, (Early Iron Age), Bronze tools**

## Murgab Delta Group

The Elken-Depe painted pottery tradition witnessed its fullest growth in the Murgab delta at the most celebrated site or Yaz-Depe, located at a distance of 35 km. from the modern city of Bairam Ali (Fig. 4.2). So much so that in archaeological writings, the pottery is called more as the Yaz Pottery rather than the Elken Pottery. Archaeologically, the site of Yaz-Depe has been extensively excavated and studied; the Early Iron Age levels (Yaz I) have been dated here to 900-660 B.C. Like the city of Izat Kuli on the Misrian plains, the city of Yaz-Depe witnessed the rise and growth of a high citadel-mound carrying some monumental structures and also the wide-spread lower township. The cultural levels have yielded several stone objects, such as mortars, querns, pounders, mace-heads and door-sockets, besides a bone bit. They have also yielded a number of bronze applique ornaments for sewing on clothing and some iron objects. The metal objects also include bronze arrow-heads with double barbs and sockets, as also augers and knives (Fig. 4.3). It is, however, to be noted that at this site there was a complete absence of the wheel-turned pottery of Namazga VI (Late Bronze Age) type; instead there has been a preponderance of a new kind of handmade painted pottery. But Yaz-Depe was not the oldest site of the new culture-complex. Elken-Depe was older and here a small percentage of Namazga VI pottery has been recovered, to begin with 5.5% and later 14.5%. The same was true of Ulug-Depe, where also we have an equally old stratum. The types of this group of pottery include both red ware and grey ware vases and goblets.

As Elken-Depe was possibly one of the ancient capitals of Parthia so Yaz-Depe, occupying about 40 acres of land, was the ancient capital of Margiana. Its citadel, extending over 23 acres of land, rose majestically above the ground, on a 8 m high mud-brick platform. The extant walls of the fortification are about 4 m high, giving 12 m of total height to the ruler's place of residence and work. That the fortification was embellished with towers and also an imposing entrance can be worked out from the excavated remains but what is difficult to make out is the exact nature of a big Central Hall in the southern sector. It measures 26m × 7m and it may have been used for the ritualistic purposes or for the kingly audience. It was, of course, not an isolated building, adjacent to it there have been a number of long rooms with vaulted roofs. There are positive indications that the building was double storied. The excavators feel that during the last stages of its life, the building was used as a garrison; some two hundered sling-stones were recovered from the excavations!

And then the township. A vast conglomeration of mud and mud-brick houses consisting of multi-chambered apartments but without any conscious planning. The roads and lanes intertwined as if each one wanted a shortcut for his own house. In the periphery stood the potter's kiln as well as the craftsmen's shops. Different sectors were connected not by straight roads but by footpaths. This aparent apathy towards the houses of the common man was the general characteristic of the West Asian towns, even of the earlier periods, and starkly contrasted with the Indus towns in whose planning conscious efforts were made much before the foundations of the towns were laid (Gupta and Asthana 1978).

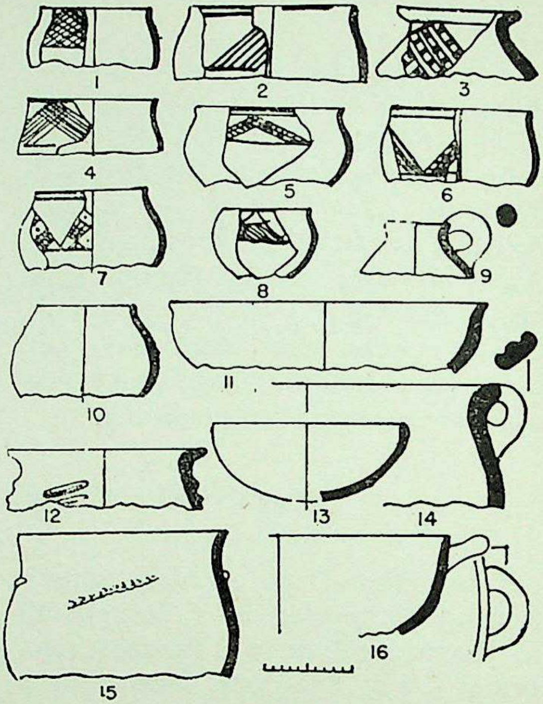


**Fig. 4.4. Yaz-I Painted and Plain Grey Ware pots (Early Iron Age)**

Something about Yaz I pottery which was basically handmade (Fig. 4.4), although in the beginning it still contained 5 to 15 per cent of wheel-turned pots, vases and goblets which mainly belonged to the tradition of red slipped and grey ware of the Namazga VI. This small percentage of pottery of the older tradition existing in the early levels is extremely significant in the sense that it emphasises the continuance of the traditions of the basic crafts, and, therefore, existence of a group of older population through the ever-changing pattern of cultures in this part of the world. But nothing more than that. The Yaz pottery as such is quite individualistic. It consisted of handmade globular pots and bowls with painted designs in intricate geometric patterns, often around triangles. The pigment was reddish brown, less often greenish. The burnished grey ware pots, on the other hand, was more often plain but carrying extremely characteristic loop-handles at the rim. These varieties are noted in addition to a much larger number of plain cooking pots and pans found in the excavations.

Opinions differ on the issue of the origin of the Yaz I painted pottery, some see in it a purely local development while others count the parallels in the basic decorative patterns of this ware into the northern Andronovo incised designs. Pumpelly and Schmidt (1908) on this very basis (Andronovo parallelism) talked in terms of 'barbarian invasion from the north'. It may, however, be pointed out that this comparison is false since northern Steppe culture is completely devoid of painted ware of this kind. Further, modelling by hand is itself no criterion for value judgement. Fashions in material items do change within the framework of 'culture change or value change from within'. To give an example from contemporary world one may quote the Indian scene in which handmade (spun and woven both) cloth is considered more sophisticated than the machine produced cloth.

Masson and Sarianidi (1972) trace its diffusion to Mundigak VI, through Termez, where at Kuchuk Tepe a similar ware has been found. It reminds us of the situation which existed in the Late Chalcolithic times (Namazga III Geoksyurian complex) when the south Turkmenian (Tedjen delta) cultural traits travelled upto the lower Helmand Valley — Shahr-i Sokhta in Seistan, Mundigak in south Afghanistan, Quetta Valley in northern Baluchistan, and Gumla in the Gomal Valley.

In this context we are also reminded of another phenomenon of Geoksyurian period. It is the prevalence of and system for intensive agriculture in the deltaic region. During the Geoksyurian period the Tedjen delta had developed canal system of irrigation, to begin with for intensive agriculture but later on for the actual survival when the flow of water started decreasing considerably. During Yaz I period the entire story repeated itself in the Murgab delta. Here also canal irrigation was adopted. Surprisingly enough, the depth and width of the canals also remained the same as they were 2000 years ago.

In the Murgab delta there was, besides Yaz-Depe, another site which deserves some attention. It is Arvali-Depe, surrounded by a group of very small village-settlements. Although culturally all of them belonged to Yaz I, yet they occupied a different oasis, in the western part of the delta. Uudoubtedly, they played the role of economic-support : man, material and agricultural produce.

## EVALUATION OF THE EARLY IRON AGE OF SOUTH TURKMENIA

The basic issues involved in Yaz I Culture go beyond the spheres of arts and crafts, houses and settlements, and other aspects of material culture, they concern the culture-change in the framework of second urbanization in south Turkmenia. And it is in this respect that we have to evaluate the Early Iron Age.

To begin with, it ushres in around 1000 B.C. what is called the Era of Second Urbanization in Central Asia; the first had ended in Namazga V times, around 1700-1600 B.C. The situation is somewhat similar to India, there also the era of First Urbanization ended around 1700 B.C. and the era of Second Urbanization started in the last stages of the first half of the first millennium B.C. Further, the second urbanization appears to have been centered round the birth and growth of some kind of strong central authority, may be, it was kngship; may be, it was a form of oligarchy. It is evidenced in the establishment of citadels and forts of elaborate construction, starkly different from the chalcolithic fortification both in construction and utility; Bronze Age cities were not fortified as such. Within the wake of these developments, artificial channel irrigation for intensive agriculture also developed once again, in the Murgab delta as also in Dahistan. It was absolutely essential if a growing military power or kingship or even obligarchy had to survive in a dry hot region with little rainfall, since surplus agricultural economy backed by animal produce had to be maintained throughout. But this kind of economy in the Early Iron Age had not come to depend on iron technology; copper and bronze tools and weapons even now played the decisive role. Still, indirectly, iron technology sowed the first seeds for the rise and growth of the later day Parthian and Bactrian empires in south Turkmenia, since slowly and gradually weapons of war came to dominate over the domestic and agricultural implements for which iron was increasingly used.

Soviet archaeologists (Masson and Sarianidi 1972, 162) fall back upon the *Avesta* for a detailed understanding of the social-political structure of the Early Iron Age, believing that this Sacred Book of the Iranians embodies the details of the historical situation going back as far as the 9th-7th century B.C. The Text, of course, contains references to slaves and building of canals as well as to *dakhyupats* and a supreme *dakhyupat*, the term *dakhyu* stands for 'master'. Broadly speaking, it means a king or lord of a region. The supreme lord will, therefore, stand for Supreme Ruler or the king of kings or the emperor. According to the *Avesta*, under a *dakhyupat* existed a 'council of first men', like the *Sabhā* of the Vedic times in India.

Thus, if the views of Masson and Sarianidi (1972) regarding the chronology of the Avestan tradition is accepted, from the early times of the Iron Age social stratification as well as regimentation started taking place in concrete terms. Archaeological evidence, according to these authors, goes to prove it. But this kind of attempt to correlate the literary and archaeological evidences though admirable hardly goes into the process that eventually brought about a somewhat sudden change in social and cultural fields. Rise of one or a few persons collectively does not mean much unless economic mobilization is achieved.

We will deal with this problem a little later in the context of Swat Valley Culture and Aryans also.

## The Akcha Basin in Khorezm

### AMIRABAD CULTURE

Khorezm has always been an area of relative isolation because of its geographical setting and hydrological problems. Here new developments in the sphere of technology appearing elsewhere in Central Asia did come but often slightly late, and that too not effecting any substantial change in the living pattern. Thus, iron technology moved in the Amu Delta only in the 9th or 8th century B.C. it means some two to three hundred years later than the date usually ascribed to the introduction of iron in south Turkmenia. The people, however, kept on living in small villages of the pre-iron age type for centuries. This Early Iron Age culture is usually known as Amirabad Culture, after the name of the site in the Akcha basin where it was first identified. Akcha is a small tributary of the Amu. Of a number of small settlements of this culture, possibly the best studied one is Yakke Parsan (Itina 1963). Along a street two rows of houses have been unearthed. These houses followed the older tradition of the region—semi-subterranean dwellings, roughly rectangular in shape. Each one consists of a central hearth and a number of storage-pits.

The Amirabad pottery is handmade and thick-walled. In texture, it is coarse. However, often it is burnished as can easily be made out from the shining patches on the surface. Some of the pots have been found decorated with incised geometric patterns as was the fashion in the Bronze Age also.

Although some iron slags have been found in the excavations, tools found so far are of copper and bronze. These artefacts include not only the usual leaf-shaped and barbed arrowheads but also awls and needles with eye. But possibly the most important item has been the sickle since it offers a very convincing evidence in favour of agriculture. Filed observations clearly show that the irrigation system was based upon canals, short distance canals, running from the Akcha Darya. These were perhaps comparable with those discovered in the Geoksyur region of the chalcolithic period—some 3 to 4 m wide and a metre or so deep. There is every possibility that its immediate origin lies in the local canal system of the Bronze Age.

### THE TAGISKEN CEMETERY

One of the most enigmatic sites in the Syr Darya delta is Tagisken. The cemetery at this site consists of some of the most imposing burial monuments that Central Asia saw in the first half of the first millennium B.C. (Tolstov 1962; also *S.A.* 1960, No. 1) There is every possibility that they belonged to a branch of the ancient Sakas of the southern region. In fact, Tolstov once suggested that these monuments belonged to the Sakarravaks who were in touch with the southern agriculturists. Tolstov even went to the extent of comparing these graves with the huge barrows of the Scythian kings which were lavishly furnished with rich jewellery and very fine pottery. We may, therefore, consider these burials a little in detail.

These are structural tombs built of rectangular mud-bricks. The largest of them measures 25 m in diameter. It is cylindrical in form. With in this circular structure is located the actual burial chamber which is rectangular in plan. This is completely surrounded by an outer wall with a single passage of 2 m width between the two. This particular tomb yielded more than a hundred nails of bronze. In every likelihood these were used to hold up the rugs which decorated the walls as hangings (Fig. S.4.1).

There is yet another type of these tombs, the outside wall was rectangular, although the inner wall was still round. One of it measured 14 m in diameter. Within the inner wall brick-columns formed a rectangle. As usual, the burial was within it. Around these tombs there were groups of later burials, often surrounded by rectangular compound walls.

Unfortunately, all these graves had been plundered and burned and now very little of their richness and grandeur remains However, archaeological clues are sufficient to help us reconstruct not only their architecture but also the type of antiquities they must have contained. About the architecture we have already given some details but not about the movable antiquities. They include not only some of the most beautifully polished and decorated examples of pottery but also an earthen pot embellished with golden hoops. Further, in the debris some weapons of war of bronze have also been found which indicates that the buried persons may have been warrior-kings. The excavators have also discovered some extremely beautiful items of jewellery of not only bronze but also gold. Obviously, there must have been many of them, much more valuable, much more elegant and much more solid in weight. But vandalism has destroyed all evidence.

## Fergana Valley

### CHUST CULTURE

The other region which witnessed a phenomenal cultural growth in Soviet Central Asia is the Fergana Valley. The culture that developed here around 1200-1000 B.C., and continued for three to four hundred years, is called Chust Culture, after the name of the site where it was first discovered. (Zadneprovsky 1962) But possibly the more imposing sites of this culture are Dalverzin and Ashkal-Depe. Excavations at these sites and a few others have brought to light a culture-complex much different from that discovered in contemporary south Turkmenia. In fact, its roots are still largely unknown; the best that we can say is that under some kind of impetus from the north as well as the south the local neolithic culture rapidly gave birth to sizable establishments, sometimes covering more than 25 acres of land.

### HOUSES

Following the earlier traditions of the region and the Steppe Bronze Age cultures of the Amu Basin, people, by and large, lived in semi-subterranean dwellings, only occasionally they built completely over-ground hutments made of mud bricks, measuring 52×22×8 cm. These were rectangular in ground-plan. And, possibly, getting the clue from the south Turkmenian practice, they fortified some of their settlements, such as Dalverzine, located on the river Kara-Darya, a tributary of the Syr. The fortification walls, some 4 to 6 m thick, were made of mud-bricks. They have been found existing at places upto 2·5 m in height. The people buried their dead under the floors of their dwellings in the flexed manner. The discovery of a number of skulls near the hearths has been interpreted by some as the evidence of head-hunting and cannibalism although it may have formed part of some ritual.

### Economy

The main stay of their economy was agriculture and stock-breeding. In this respect it is significant to note that the Late Bronze Age settlements of Kairak Kum Culture and the cemeteries of Vuadil were still existing in the lower reaches of the Syr Darya and they seem to have exerted considerable influence over the economic pattern of the Chust sites. There are thus reasons to believe that artificial channel irrigation was also used for agricultural pursuits. Within the habitation, as a very special feature, one finds the existence of numerous storage pits, a metre or more deep, some of which were certainly used for keeping grains. The grains included wheat, barley and millet. The domesticated animals included cattle, camel, sheep and goat, as well as the horse.

That basically we are here dealing with an agrarian society which still depends largely on stock-breeding and primintive agriculture is also proved by the occurrence of a large number of bone and stone artefacts used not only in war and chase but also domestic and agricultural pursuits (Fig. 4.5). Thus, bone was used for making numerous awls, bits, arrowheads, distaffs, etc. Of these, distaffs are most characteristic (Fig. 4.5:9). These are small sized flat bone pieces with three to five comb like teeth at both the ends. They possibly held the bunch of wool in spinning. Some of the round pieces of bone with a central hole were possibly used as spindle-whorls. The holes were made in the hour-glass fashion. Spindle-whorls were, however, also made of clay and terracotta. That by cotton was also spun and cloth made simple weaving is attested by the cloth impressions on several pots, and pieces of cloth still sticking on to a pot from Dalverzin Tepe. The same animal bones were also used for making

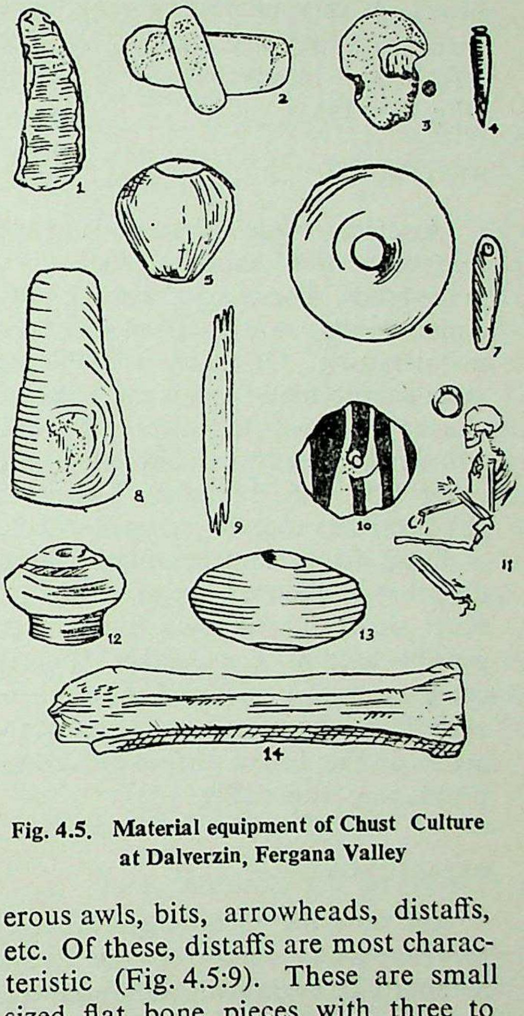


Fig. 4.5. **Material equipment of Chust Culture at Dalverzin, Fergana Valley**

beads. A very interesting long bone piece with polished ventral surface has been interpreted as a skater (Fig. 4.5 : 14).

## ARTEFACTS

Artefacts made of stone include querns, pestles, mortars, pounders, mace-heads, hoes, axes, knives, pendants, beads, as well as moulds for metal-casting. Of these, possibly the most characteristic tool is the crescent shaped polished harvester with one end conspicuously narrower than the other (Fig. 4.6 : 8 and 9). The other characteristic tool is an oval pebble with two chipped notches, one opposed the other on the two longer sides. Its exact use is not known but it was possibly used as a net-sinker. In this category may be included shouldered-axe shaped hammer-stones with dent-marks on the broad surface as well as pebble ring-stones (Fig. 4.5).

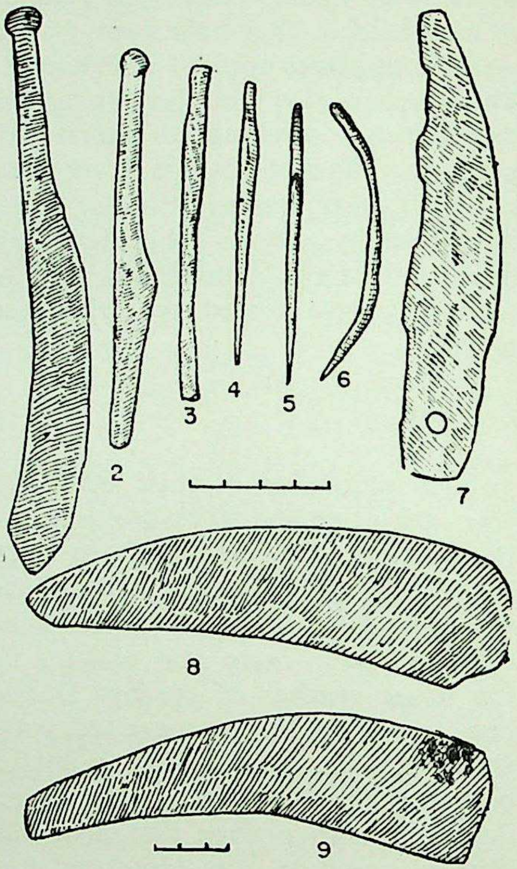


**Fig. 4.6. Metal and stone implements from Dalverzin Tepe. Early Iron Age**

## METALLURGY

And then the metallurgy, another very important aspect of the Chust economy. To begin with, although here we had entered into the Iron Age, the tools of copper and bronze of local origin still predominated. Long socketed spearheads, socketed and barbed as well as leaf shaped arrowheads; plain and tanged chisels, curved sickles, long knives with straight back and sizable handles with knobbed ends; awls; needles, including those with eyes (Fig. 4.6 : 1-7) and many other objects, including mirrors, bracelets, rings and beads and also pots and pans, went into the make-up of the tool-kit for war and chase as also domestic kit and jewellery. Significantly enough, there are also the horse-bits. Of iron, only some slags and tanged knives have been found. Technologically, most of the metallic objects were casts as has been proved beyond doubt from the discovery of a number of very fine moulds made of stone. The forms of the objects, such as mirrors and ear-rings, are beautifully carved in intaglio. It is significant to note that within the habitation remains of furnaces and terracotta crucibles with lumps of molten bronze have been found in large numbers.

## POTTERY

And lastly the pottery. It is completely handmade red slipped ware showing crackled surface (Plate XV) with paintings executed in black pigment (Fig. 4.7); the grey ware sherds are in hopeless minority. The decorative designs are geometric, largely hatched or solid triangles arranged in a single row or placed opposed to each other, lozenges, similarly treated, and chessboard pattern. Besides these patterns, there are the linear designs, 'X' 'V' and 'W' shaped, as well as straight, oblique and zig-zag lines and concentric circles (Fig. 4.8). Also included is a unique sherd showing a man with a raised hand. Needless to mention that along with these painted pots there is a thick coarse ware for everyday use. The pottery types include a variety of bowls, tumblers, globular vessels with short neck and with short body and highly curved neck, lids with central knobs, etc. Of these, bowls with lugs, plain and perforated, bowls with concave necks and carinated profile, bowls with nosed lugs, and bowls with short tubular spouts are extremely characteristic. Included in this category is a solid cylindrical stand, for a bowl perhaps.

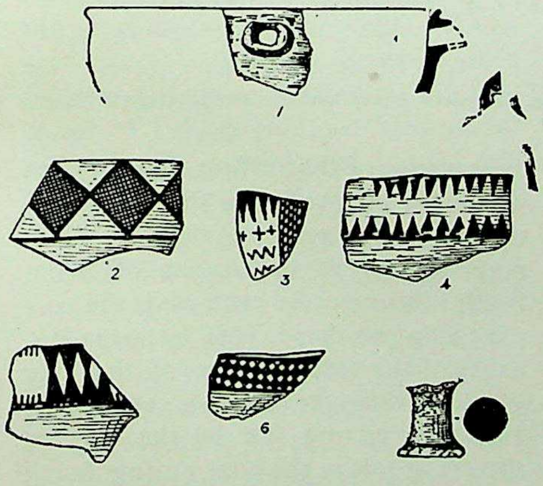


Fig. 4.7. **Painted pottery (black-on-red) from Dalverzin Tepe. Early Iron Age**

What applies to Dalverzin Tepe also applies to Ashkal Tepe and other sites. The siginficant point that has to be made in this respect is that triangles and rhombs also figure prominently in Yaz I pottery of south Turkmenia although the Chust figures of the same forms are conspicuous by their somewhat disproportionate elongation which is totally absent in the Murgab delta. Then, there is the marked space gap also. On the whole, therefore, the Chust pottery still remains somewhat regional with only distant similarities with the south Turkmenian and Lower Syr Darya elements.

## TERRACOTTA OBJECTS

There are a number of terracotta objects also, such as perforated discs made out of pot-sherds, spindle whorls, cones, ear-rings, barrel shaped beads, etc.

## CHUST POTTERY : A REVIEW OF THEORIES

According to the excavator, Y. Zadneprovsky, the pottery, etc., show similarity with that from Anau IVA and Sialk Cemetery B. He also compares the crescent shaped sickles with those from the Yang-Shao sites in China (Zadneprovsky 1962). But possibly the most interesting hypothesis is based on the comparison of the

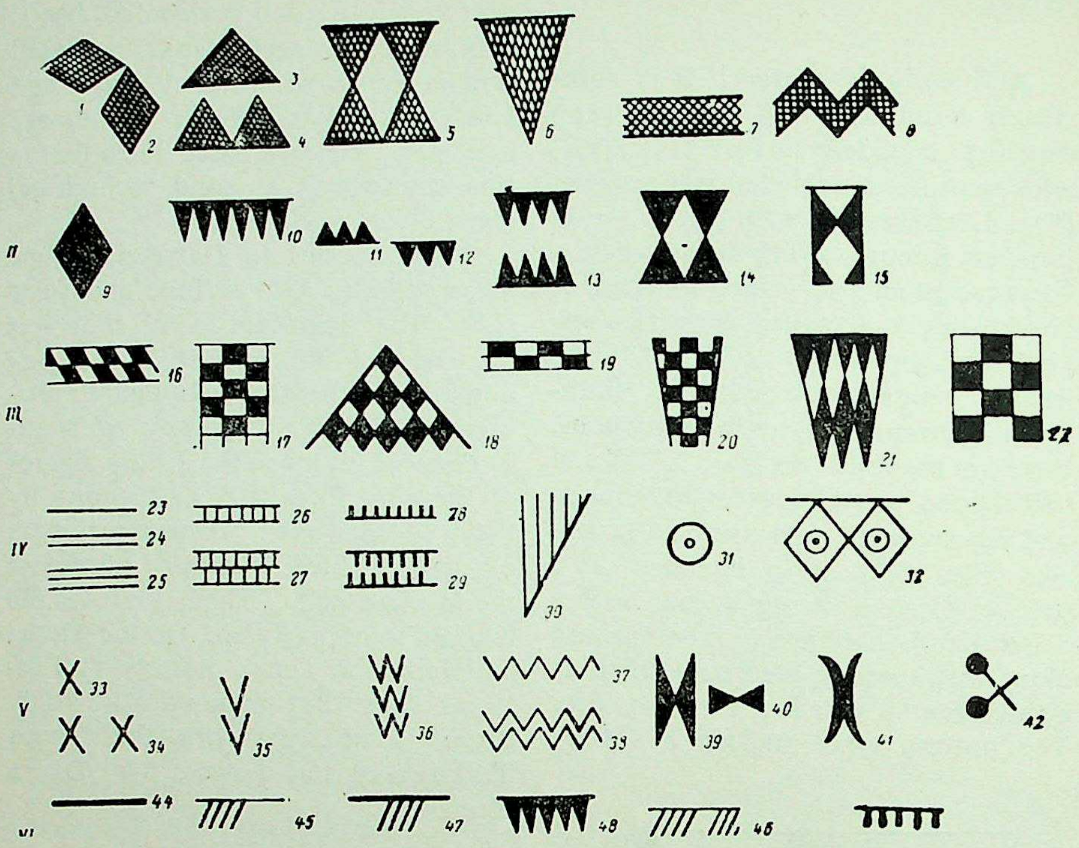


**Fig. 4.8. Black-on-red painted designs on pots from Early Iron Age (Chust Culture) Dalverzin Tepe**

Chust pottery with that discovered in India in the context of post-Harappan Chalcolithic pottery from central and western provinces. We will like to deal with it in details because it involves a number of fundamental issues.

Let is be stated at the very outset that the two potteries differ basically in the mode of manufacture. The Indian pottery is largely wheel-turned while the Uzbekistanian is completely hand-made, except about 40 sherds of doubtful wheel-turned varieties. The similarity in the shades of the red slip is such which does not call for a common source of emergence. So is also the case with the crackled and matt appearance of the surface. In examples where the surface is not burnished or the clay is not well-levigated, crackling may appear in the course of firing itself; in some cases even while the pots are being sun-dried. This happens because of the readjustment of the clay particles when the moisture evaporates. However, mixing salt in the slip or throwing salt in the kiln during firing also leads to the similar result. Whatever may have been the reason, none can be considered a tangible ground for a common source, or common origin.

The similarity shown in the painted designs ignores one of the fundamental principles of archaeological studies. A painted panel or a painted design is a complete unit in itself. It is the outcome of a unified thought or imagination in which the component items are meaningfully joined. Each panel is like a complete word consisting of individual items which serve the role of letters. A whole design is like a sentence expected to convey a complete idea. As the two words are identical only when their spellings are identical, so also the two panels are comparable when the placement of their individual items is identical. Similarly, when we have to identify a sentence with another sentence, we have not only to see the presence of identical words but also the identity in the order of their arrangement. The same rule should be applied in the case of decorative designs. A design should be compared with another design only when there exists complete identity in the arrangement of the panels. As at no stage we can break a word or a sentence in individual letters for purposes of comparison, so also at no stage should we break the panels and the designs into individual items for comparison.

A deviation from this principle is possible in the case of representational art involving faunal and floral motifs. The reason for this shift in principle is simple. In the case of figures, it is the style involved in the portrayal that is specialized and passed on, or imitated. Due consideration should, therefore, be paid to the subject matter and the style of its delineation when the question of comparison is raised.

Applying this principle, the long list of the comparable geometric designs proposed by Zadneprovsky is reduced to a very short one. It might, at best, include solid or hatched triangles and lozenges arranged in a row around the neek, opposed triangles placed apex to apex in a frieze, and vertical or horizontal lanes or ladders with trellis hatching.

However, even this comparison raises a very vital question for the protohistorians.

What is the distribution of the comparable designs during the 2nd and early 1st millennia B.C.? These geometric designs can be seen at several places in Iraq, Iran, Central Asia, China and India. Therefore, they do not seem to be so specialized as to warrant a common source of origin or contact. In fact, reliance should be placed more in the case of floral and faunal motifs found in identical styles. Simple geometric patterns, unless these are of rare types, should not be used as a good evidence of cultural contacts. They are usually generalized in character and widespread in time and space. Not that such an evidence is no evidence but it is only of circumstantial nature which is always of secondary importance. Judging from this angle the forms of the Chust earthen pots and pans also show only a general similarity, except in the case of bowls with everted rim and bowls with carinated neck. The high necked jar does not show overall similarity. The similarity in neck and dissimilarity in the body profile in the examples of the two assemblages would vouch for their non-comparable character than for their comparableness. The spouted vessels from the Chust sites have extremely short spouts, hardly 2 to 3 cm. long. The spouts are of tubular and obliquely cut varieties, found slightly below the rim. Although such spouts are also found in the Chalcolithic sites of India, their real source seems to lie in the neighbouring Kelteminar neolithic culture of Kazkhstan. In fact, when Sankalia (1979) talks of comparable spouted bowls and vessels of India and Iran he means long channel-spouted bowls where the spout emerges from the rim itself, and the long tubular-spouted vessels where the spout is about 1/3rd of the height of the vessels. The short spouts and lips existed in India in the southern Neolithic culture, their origin need not be traced to any outside contacts. In the absence of real channel spout or long tubular spout in the Chust complex, one would hesitate to produce the spouted pots for comparison with the Indian types. Short-spouted pots seem to be of local origin in both the regions.

There is a disc-based solid stem in the Chust collection which is supposed to be identical with the stem of wine cups found in hundreds from the lowest levels of Navdatoli. In the absence of a complete example the question remains open.

The comparison shown in the case of shallow flat dough-plates and storage jars also suffers from the lack of traits of any specialised character. They are quite common in ancient Asia.

But can we say the same thing about the similarity that exists in the shape of the bowls? The fact of the matter is that these shapes are very simple and basic, and are found from the 3rd millennium B.C. onwards from Egypt to China and from China to India. Recently, similar bowls with everted rim have been discovered in the Persian Gulf sites excavated by a Danish Expedition (Gelb 1970). Therefore, even though the existing likeness cannot be denied, its simple character coupled with its wide distribution in time and space would relegate this evidence also a little in the background.

The overall picture that emerges out of this discussion is simple : so far the evidence of pottery is not very convincing in establishing any real contact between the Chust Culture of the Fergana Valley and the Chalcolithic culture of India, although some similarity in the non-specialised pot-forms and painted designs does exist. But this can only show that these two cultures shared the general tendencies of the time prevalent in this part of the world. However, the diffusion of individual items cannot be pin-pointed with any amount of certainty. At the present state of our knowledge, therefore, any real contact between the two potteries is not in sight.

A close scrutiny of the other items of the Chust complex also does not help us in visualizing such a contact. The two cultures significantly differ not only in their material items but also in their moral behaviour. No doubt, both bury their dead under the floor of the house, but in India multiple pot-burials and extended burials in pits were adopted while in the Fergana Valley it was the crouched burial which was the popular mode of the disposal of the dead.

Since the pattern of economy was agro-pastoral in both the cases, their tool-kits show a few common items, *e.g.*, perforated rings, querns and pestles, net-sinkers, spindle-whorls, perforated discs, but these are also of wide distribution among the Neolithic-

Chalcolithic cultures of the Old World. So is also the case with the domesticated animals and cereals. However, it may again be noted that only the Chust Culture had horse-breeding on an impressive scale and not the Indian Chalcolithic cultures.

The two complexes also differ in their metallurgical achievements. While the Indian chalcolithic complex is devoid of any knowledge of iron, the Chust complex presents the evidence of the use of iron implements, right from the beginning, however elementary it may have been.

The two cultures also differ in their habitation-pattern. All the Indian sites, known so far except, probably, Eran, in Madhya Pradesh, are open villages while, Dalverzin, the site opened by Zadneprovsky, is definitely fortified.

About the racial connections of the people of the two cultures, it may be stated that the physical types with Mediterranean features whose remains have been found in the graves were present in south Turkmenia from the 4th millennium B.C. onwards. These were also present in Khorezm in the neolithic Kelteminar culture of the 2nd-3rd-millennium B.C., and they are also found in India from the 3rd millennium B.C. (Harappa Culture) onwards. With this antiquity of the Mediterranean stock in both the countries, the argument of racial affinity to prove the cultural contact in the early 1st millennium B.C. is not well founded.

Two major aspects, of time and of space, also do not help us very much in visualizing the proposed contact. There are two dates for Dalverzin :

(i) 27230±120 B.P., *i.e.* 773±120 B.C.
(ii) 3050±120 B.P., *i.e.* 1100±120 B.C.

Without correcting these dates in one way or the other, the Chust is to be bracketed between circa 1100 and 770 B.C. which coincides with the fag end of the Chalcolithic culture in India. During this period the tradition of painted ware had already come to an end, what remained was the plain Black-and-red ware with its associates of plain wares of dull red and grey colours. This is the stage of Nagda II, Bahal II, Eran II and Prakash II. The time-scale shows that the Chust Culture is also contemporaneous with the Sialk VI stage. In this period iron was in common use in Iran. Its early stage also coincides with the end of the Namazga VI stage and the whole of the Yaz I stage of south Turkmenian chronology. This was the time when iron had been introduced in Turkmenia as also India. It, therefore, appears quite reasonable that the Chust Culture is placed within the general frame-work of the Early Iron Stage cultures of Iran, south Turkmenia and India and not in the pool of the Chalcolithic cultures of the Indian peninsula.

The factor of gap in space is also worth noting, although it may be argued that in future it may be filled up. The spatial gap between the Fergana Valley and Central India in which the Chust or the Indian Chalcolithic sites have not been found is very vast. The Chust Culture is in fact an arid-zone culture with a definite local bias. Whatever traces of foreign elements are seen in it they seem to have come from the areas the Valley was conneted with earlier also including south Turkmenia, and not from areas thousands of kilometres away. As mentioned above, so far, more than forty sites of this culture have been located, but not even one outside the Fergana valley. That again shows the strong localized character of the culture, and simultaneously raises a doubt in our minds if the Central Indian Chalcolithic culture and the Chust Culture could possibly have maintained close contacts, directly or indirectly, as has been visualized by Zadneprovsky.

## IRON AGE GANDHARA GRAVES, PLAIN GREY WARE, PAINTED GREY WARE AND THE VEDIC ARYANS—A REVIEW OF THE PROBLEM OF CORRELATION

In the Swat Valley, at a number of sites grave-yards have been discovered. In a few examples there are habitation sites also. Some of them have been excavated by Dani as has been detailed in the chapter dealing with the Bronze Age. Here we will deal with a particular theory propounded by Dani.

Dani's hypothesis is that the Gandhara Grave Culture may represent an early stage of settlement of the Aryans in their march from the north-west towards the Ganga Valley. Dani has accepted the views of B.B. Lal (1955) that the Painted Grey Ware in the upper Ganga—Yamuna doab may represent the Mahabharat stage of the Aryan settlement in India datable to circa 1000 B.C. He also picked up a thread Lal left behind while arguing for the P.G. Ware and the Aryans. Lal had observed that "........ it may be well worth the trouble to study the distribution of painted and plain grey wares while trying to work out the movement of Aryan-speaking people in Western Asia and Southern Europe." (Dani 1967, 54). After quoting this sentence, Dani immediately pronounced his judgement in the following words : "And now we have the plain grey ware in our region falling in the same period, the middle of the second millennium B.C. which Lal (1955, 147) thought to be the lower limit of the P.G. Ware."

At this stage Dani has completely confused his line of arguments. His statement places the beginning of both the plain grey ware of the Gandhara Grave or Swat Culture and the Painted Grey Ware in the period between 1600 B.C. and 1500 B.C. Now from this it will follow that if the plain grey ware represents the early stage of the Aryans the P.G. Ware should also represent the same stage. This is not clear, for all that Dani says is that "while the earlier date of Lal (1500 B.C.) tallies with the first invasion in our region, we have so far no evidence for extending this invasion into East Punjab and the upper Ganga Valley", obviously because Gandhara Grey Ware has not not come from these regions. But then why should P.G. Ware also not represent the first wave of the Aryans when the P.G. Ware is found from Amritsar to at least Fatehpur in the doob? In his sub-conscious mind he seems to have divided the P.G. Ware in two stages, as he has divided the Plain Grey Ware, one belonging to the middle of the 2nd millennium B.C. and other belonging to the beginning of the 1st millennium B.C. According to him, the first will not, although the second may stand for the Aryans.

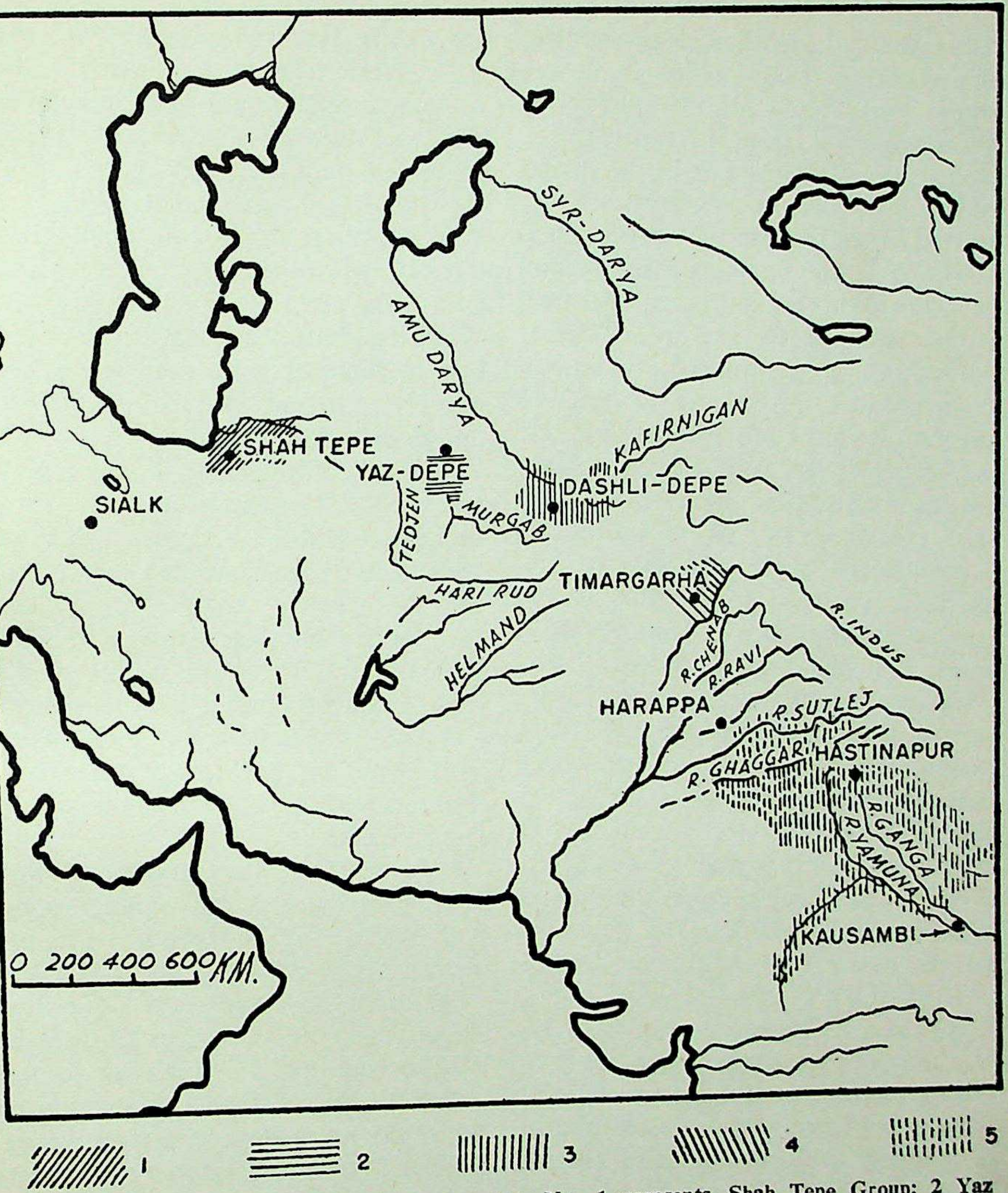

SYR-DARYA
AMU DARYA
KAFIRNIGAN
SHAH TEPE
YAZ-DEPE
DASHLI-DEPE
SIALK
TEDJEN
MURGAB
HARI RUD
TIMARGARHA
HELMAND
R. INDUS
R. CHENAB
R. RAVI
HARAPPA
R. SUTLEJ
R. GHAGGAR
HASTINAPUR
R. GANGA
R. YAMUNA
KAUSAMBI
0 200 400 600 KM.
1
2
3
4
5

Fig. M.4.2. Map showing different grey wares. No. 1 represents Shah Tepe Group; 2 Yaz Group; 3 Dashli-Sapalli Group; 4 Gandhara Grave Group, 5 Painted Grey Ware Group

(It is significant to note that these different grey ware groups do not form a continuous chain although they make an arc with possibilities of limited borrowals. In fact, a few pot-forms do appear to link them, but quantitative and qualitative analyses of these pottery — groups clearly show that, by and large, each group represents a separate entity. It may also be marked that the Khorasan mts. are devoid of grey wares of the 3rd and 2nd millennia B.C. Similarly, the Punjab is devoid of Gandhara Grey Ware as well as the Painted Grey Ware.)

That is why he further observes, "But the second invasion came about the same time when the Painted Grey Ware culture is seen in upper India. Could we, therefore, not see the spread of the latter culture as a result of the second invasion from the west?" (Dani 1967, 55). The evidence of second invasion Dani sees in his pd. III which is characterised by the use of lesser amount of grey ware plus iron and post-exposure burial and is dated to the middle of the 9th century B.C. He is, however, not at all clear as to how the invasion of plain grey ware turned into Painted Grey Ware within the same century. Since, according to him, the P.G. Ware already existed in the Punjab from 1500 B.C. does he mean to say that the torch of invasion was handed over by the plain grey ware people in the Punjab to the P.G. Ware people who carried it to the upper Ganga Valley, or does he mean that the plain grey ware invaders left behind all their belongings and adopted the Painted Grey Ware in the Punjab and marched ahead? One wonders where lies the truth in this over-dramatization of the events.

In this connection it may also be pointed out that some of the plain grey ware types of the Gandhara or Swat culture are identical to those found in the deepest levels of Charsada (layers 37 to 51) which have been dated to the 4th-6th centuries B.C. Dani feels that the Charsada examples are the survivals of the plain grey ware of the Gandhara or Swat Culture in the Achaemenian period. In the lowest levels of the Bhir Mound at Taxila also a plain grey ware has been found which is datable to the 5th-6th century B.C. But who the plain grey ware types are linked with the P.G. Ware is not at all clear for the present since there are definite typological and decorative differences. It may be noted that a plain grey ware, always found associated with the P.G. Ware has an absolute typological identity with the P.G. Ware. The Gandhara plain grey ware and P.G. Ware associated, as also unassociated (*e.g.* in Jammu), plain grey wares are entirely different in typology, fabric and decoration.

At present, therefore, the plain grey ware of the Gandhara or Swat Culture appears to have formed a distinct zone of its appearance and expansion, coeval roughly with the ancient Gandhara region. Its association with the Painted Grey Ware is not at all clear. And, therefore, it cannot make a common cause with the P.G. Ware in solving the problem of the expansion of the Aryans upto the upper Ganga basin.

However, even if the Gandhra or Swat plain grey ware is not related tot he P.G. Ware, can it independently represent an Aryan culture of the early stage?

Without answering this question categorically at this stage, let us raise another question which is basic to our understanding of the Aryan Culture. What do we mean by the term Aryan Culture in terms of material equipment which could survive the ravages of time and, therefore, was capable of being recognised by archaeologists?

Although in the *RV* (1.44.10) some distinction is likely to have been made between a village and a town, the Early Vedic settlement was more of a village type than of town type. A group of houses built near each other was surrounded by a hedge. The term '*Pur*', probably, stood for some sort of fortification. Chariots, carts and horses provided the people the common means of transport. Ox, cow and buffalow were domesticated. Bow-and-arrow was used for hunting, and net for fishing. Spinning and weaving wool and cotton was commonly practised. Mats of grass and reed and bags of skin were prepared for daily use. Secrifices and sacrificial places are repeatedly mentioned. Irrigation, plough-share, sickle, barley, etc., go with the description of agriculture. Drum, flute and violin are mentioned in connection with recreation and music. Ear-ring, armlet, necklace, etc., occur as ornaments. Metallury was an established profession. Furnaces and bellows are described in detail. Minerals and metals, probably other than iron, were smelted and forged; iron came slightly later in the Atharvaveda period. Pots and pans were made of metal, wood and clay. In the Vedic literature several types of pots are mentioned and the techniques of clay making, firing, post-firing treatment, etc., are given. But neither the colour of the pots nor the nature of decorations over them is mentioned. Architectural temples and icons in plastic form are not mentioned. The dead was disposed of in a ritualistic manner. Cremation was the order of the day, although sometimes burial as well as exposure also took place. Post-cremation burial with ashes placed in earthen pots or in pits dug below the ground, sometime with mounds of earth raised over them, was the general practice.

People were fair and tall and their habits in general were pious and virtuous. Thus, they took for themselves the word 'Arya' and a wife called her husband 'Aryaputra', *i.e.*, the son of a virtuous father. Thus, according to C. Sivaramamurti, 'Arya' does not stand for any particular group of people (personal communication) denoting an ethenic entity in terms of anthropology.

Now the question arises as to how far do these details fit in the pattern presented by the Gandhara Grave or Swat Valley Culture?

Let it be admitted at the very outset that the picture outlined here is not very helpful in determining a culture as typically Aryan. Much of it is of the generalized nature and can fit in well in other culture-complexes of India, datable, in the light of available $^{14}$C dates of various material cultures of the post-Harappan period, to a period roughly between 1800 and 600 B.C. + 250 years, depending upon the desire to use MASCA corrections. Springing up of several theories in the field during the last decade is a sufficiently good pointer to this state of affairs. But the case of Gandhara or Swat Culture certainly deserves an added consideration because of one fact. The $^{14}$C date (1700-1500 B.C.) of the post-cremation burial No. 21 of Loebanr I establishes Cremation as the regular mode of the disposal of the dead amongst the people of this culture from the very beginning. Let it be made absolutely clear that the Rig Vedic Aryans cannot be conceived as following only a single mode of the disposal of the dead, *i.e.*, burial or cremation. Althogh the absence of cremation in other contemporary cultures in India does not necessarily imply its non-existence in those cultures, yet its archaeological evidence is certainly a proof of its existence.

Not only that, there are definite examples at Katelai I where inhumation tombs with one or two skeletons are flanked by post-cremation urn burials. Thus, probably, they were existing simultaneously, a deduction that clearly emerges from the early Vedic texts, *e.g.*, *AV.* XVIII, 2.2.34. In this connection we are more inclined to accept the observations made by the Italian scholars like Stacul rather than those made by Dani who has tried to over-simplify the issue of burial customs —'one custom, one culture, one period' equation suffers from all sober sociological studies of even the present day societies (Gupta 1972, 1-11)

The anthropological studies calculate the height of the males as 170 cm. and females as 160 cm. which is certainly on the high statured side, as the Aryans seem to have been.

Moreover, if we are at all on sure grounds, even linguistically, that the Aryans came from the countries northwest of India, then the Gandhara Culture's pottery, antiquities, burial customs, physical types, sufficiently early date (1500 B.C.) and their geographical distribution lead one not to completely discard the hypothesis of Dani : that the Gandhara Grave Culture was closely related to the traditions of northern Iran and Soviet Central Asia, which have been, at one time or the other, called 'Aryan' by scholars, although whether they have really been Aryans of the Vedic milieu or not is a separate issue; in fact, a moot point so far, as has clearly been pointed out earliar.

Since pottery is taken to be the ABC of archaeology and in all our discussions one ware or the other is brought forward to identify the Aryans ethnically and culturally, it may be worthwhile knowing about earthen ware in the early Vedic literature.

In connection with pottery in the Vedic literature Shivaji Singh contributed an interesting paper in the 1968 Patna Seminar on Ancient Indian Potteries. It dealt with the references to pots and pans of metal, wood and clay in the Vedic texts. The pot was then called '*patra*' and *Ukha*, *Kalasa*, *Kumbha*, *Sthali*, and *Kapala* were some of the earthen ware types. According to Singh, the ukha, a knobbed pot, was used both as a ritualistic vessel during cremation and as a domestic vessel for cooking food and boiling liquids. From a reference in the *Satpatha Brahmana* XIV, 9,4,18 it appears that the pot was flat based with raised sides. Sthali, *i.e.*, thali or plate, was used in those days for making milk pudding. The *kumbha* was used as a water-vessel and the *kalasa* for storing *soma* and good drinking water. The term stood for the globular jar with a short narrow neck. *Kapala,* although means a skull, denoted a bowl.

Although these and several other names of pots occur in the Vedic literature, it is generally not possible to fix up their shape and size to attempt any typological study.

As far as the technological aspects of pottery-making are concerned there is sufficient material in the *Brahmana* literature to show that the clay was very well levigated and the resin of the *palasa* tree was boiled in water and the liquid was mixed with clay *SB*, VI. 5.1.1. Similarly, goat's hair and powdered gravel and iron were also mixed. Sand and crushed potsherds have also been recommended for this purpose, *SB* VI.5.1.9; 5.4.1. All of them added to the strength of the pots. But how far really all these can be worked out either in the case of the Gandhara Grave pottery or in the case of Painted Grey Ware is difficult to say, particularly when we know that the detection of the organic material in baked pots is difficult. Further, such details of technique could apply to earlier or later or contemporary, but so-called 'non-Aryan', potteries also. One of the pre-firing treatments of the earthen pots of the Vedic times was known as *dhupana* or fumigation, *SB* VI 5.4.1 and 14. We do not know if this has been detected in the case of any ware supposed to belong to the Aryans.

Shallow pits for firing and arranging and changing the sides of the pots for complete baking are also mentioned.

After the firing, some pots, meant for sacrificial, purposes, were bathed in goat's milk.

It may not be out of place to mention that although there are references to girdles, bands and knobs as decorations of the pots, the painting does not seem to have been mentioned in the Vedic texts in this context.

Similarly, although wheel is mentioned in connection with carts and chariots, potter's wheel is not mentioned.

We do not know how far the absence of such references in literature be made as the basis of a positive theory or sufficient ground to reject a theory otherwise well argued. However, in the archaeological methodology of correlating the literary data with the archaeological evidence, it is to be clearly borne in mind that literature, particularly of ancient times, invariably misses one detail or the other, unless it is a special treatise on a specific subject where the author had attempted to be exhaustive. The early Vedic literature cannot be expected to be exhaustive in matters of pottery making. As a matter of fact, most of the references are in connection with the pots used only in rituals and who knows that pots turned on wheel and painted were not favoured on such occasions.

Then, the horse whose reference comes in the *RV*. 1.22.161.3. should normally occur in an early Aryan settlement. At Timargarha, in the pd. III graves, horse-bones have definitely been identified along with the bones of goat, sheep, hare and snake. Iron horse-bits also come from the graves of this period. However, it may be mentioned that if Dani's periodization is accepted then in pd. I. *i.e.*, in the period of the supposed first wave of the Aryans, the presence of horse has yet to be attested. In fact, there is the dearth of archaeological evidence of the occurrence of the domesticated horse in India to determine the kind of socio-economic life of the people usually attributed to the Aryans in India as well as Asia Minor before circa 1000 B.C. on the peresent showing. The evidence of Rana Ghundai (Ross 1946, 296 and 316) is of little value since the excavations were hardly scientific and the bones have been taken to belong to onager. The terracotta figurine of the horse (?) at Lothal comes from the early levels, but its identification is doubtful. The occurrence of horse bones at Kalibangan as well as Surkotada in the Harappan context has also been in a very limited quantity (Sharma, A.K. 1974). But in case we decide to use this evidence in favour of the horse being popularly used for various socio-economic purposes in the Harappan times, the theory of correlation of the horse and the Aryans will suffer most since the claim that the domesticated horse was brought to India by the Aryans (Pusalkar 1963, 257) will be totally lost.

The other question related with it is as to why should we look for the Aryans a home outside India?

Let it again be stated at the outset that *the concept of the Aryans as a race or a single ethnic entity is largely a myth.* All that is true is the fact that there was an Aryan speech, spoken by a group of people whose occurrence in Asia Minor, Iran and India is proved by literary references—the Boghaz Kuie inscription, the *Avesta*, the Kukkeli text. And the Vedic texts do reflect this situation, although Kukkeli text plus Boghaz Kuie inscription and the Vedic texts are nearer to each other than the Avesta texts.

But could we think of linguistic identity in two groups of people without technological relationship in their material items? There cannot be any categorical answer to it : it may or it may not. In the history of mankind examples of both the kinds exist.

Therefore, so far, on archaeological grounds we are not sure if the relationship between Asia Minor and India, as also Iran, in the Early Vedic Age, was direct or indirect. There is another question often raised : Which is the common place of origin of the speech (Indo-European) used in all the three regions? Where is the original home of this speech and, therefore, of the people who spoke it most anciently? To be true to ourselves, till now we are absolutely uncertain on any of these issues. We beg to differ from Lal (1978) on methodological grounds when he tries to compare the situation of English and Urdu in India since if English has to be compared it has to be compared with Persian and not Urdu. It was Persian which was the official language of the Moghuls and not Urdu. Urdu was the common-man's language, of the rulers and ruled both, since it was born out of the interaction between Persian and Hindi in the Delhi-Meerut region around the military establishments. English never produced any language comparable with Urdu and therefore, it never developed deep roots in India. If that is so how can we say that large scale migration of a people is essential if their language has to reach the grass-root in a given region. There are many variables in human history, large-scale migration is only one of them. Obviously, material remains are more reliable than such theoretical frame-works. And so far there is no valid ground to pin-point a cultural assemblage outside India reflecting the original set of material items associated with the Aryan speaking people and, whose traces, in original or modified or changed form, we might attempt to locate up to the gateway of India first and then in the Ganga Valley.

In all our attempts to solve the Aryan problem archaeologically, the tendency has been to start from the more or less completely unknown beginnings. Lal (1955), of course, started not from the early Aryans, known so little and so imperfectly to us, but from a reasonably known point to locate the sites mentioned in the epic *Mahabharata* and excavate and explore their depths. The results obtained from at least 30 such explored sites showed that the P.G. Ware occurs in the lowest levels of these sites. It gave the clear idea of the spread of the P.G. Ware people in the Indo-Gangetic divide and the *doab* around 1000 B.C. From this Lal (1978) tried to work out further back in time and towards the west, beyond the Ghaggar in the Pakistani Panjab. But are doubt if he has at all succeeded in doing so. In this context it may be pointed out that his reference to the discovery of a single sherd at Harappa by Allchin (1968, 27), is of little consequence since regular excavations conducted at Harappa have not yielded a single sherd from any regular layer. We recall a similar discovery of a P.G. Ware sherd on the mound of Gilund in Rajasthan by Dr. B. Ch. Chhabra which prompted us to excavate the site (Lal 1959-6) but of no avail—not a single sherd was found in the excavated trenches. Obviously, Harappa can never be included in the list of the P.G. Ware sites.

Lal (1978) has also mentioned that there are a number of sites in Pakistani Punjab where P.G.W. has been found. He has not quoted the source nor has he given details, but our information is that it is a case of mistaken identity. There is no P.G.W. site in Pakistani Punjab known so far.

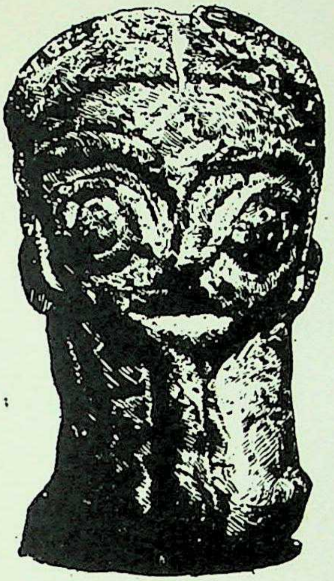
Scatul and Dani have also tried to see the typological similarity of the pottery and other antiquities with materials from different sites in Western Asia and Central Asia. Lal (1978) has also quoted a few copper objects, such as a copper needle with eye and a spiral ended ring which are found in identical forms in Swat Valley as well as northern Iran. But we are afraid, the distribution of such types is very wide in time and space see (Chapter 3), and can hardly be used for the migration of the original Aryans from Shah Tepe region to Swat Valley. Bernhard, on the other hand, tried to see the physical types of the Gandhara Grave people in Central Asian sites, but these similarities range from *circa* 4000 B.C. to 500 B.C. (Thapar 1970). Stacul, therefore, takes the latest date and does not make much of the sporadic similarities. What is really needed is an overall comparison with definite items of more or less contemporary period basing on the system of horizontal comparisons. In this regard the excavations conducted at Ghaligai rock-shelter is very significant since at this site, located in the Swat State, we have a complete sequence of cultures ranging from the 3rd millennium B.C. to 3rd century B.C. (Stacul 1969). In all, there are seven levels, from VII on the top to I at the bottom, the latest and the earliest, respectively. The pottery from levels V and VI are identical with the earliest pottery of the Gandhara or Swat Culture belonging to the middle second millennium B.C. and later. What really makes this pottery significant much more is its typological similarity with some of the pots found at Tahirbai-Depe in the Murgab delta of south Turkmenia—a bowl-on-stand and a spouted jar. However, there is no identity as such. In fact, there is somewhat closer resemblance in cylindrical conical vessel, a kind of beaker with flaring mouth, constricted body and sharply carinated base found in Yaz-Depe I of the same delta. But while Yaz II is of the Iron age (600-300 B.C.) Tahirbai-3 is of the Late Bronze Age (1300-1000 B.C.). Attention has also been drawn to the Tepe Hissar, Shah Tepe and Tureng Tepe examples of chalices in grey ware comparable with the chalices of the Gandhara Grey Ware but unfortunately they are all from too divergent dates to have any direct bearing on the problem. Recently, Mughal (1977) also showed some comparable forms but only four of them may be valid. There is, therefore, no firm ground to believe that the Gandhara Grey Ware, and therefore the people, belonged to the north Iranian family. Why cross over the vast stretches of the Khorasan mts. when, nearer home, south Central Asia had pottery, etc., of a similar kind.

The discovery of the Swat Valley Culture, however, is epoch-making because for the first time it has brought to light a culture-complex in the gateway of ancient India which expels the darkness that pervaded the period between the fall of the Harappa Culture and the rise of the Buddha, rather, the coming of Alexander. Truly, it is an important proto-historic culture of ancient India. From an archaeologist's point of view it is immaterial whether it solved the problem of the supposed migration of the the Vedic Aryans from the Caspian Sea region to the Iudus plains or not, but that it has stretched back the history of material culture of NW India from the deepest levels of Charsada (6th-4th century B.C.) to the early stage of the Chalcolithic (1500-1000 B.C.) is extremely significant. In fact, Ghaligai, located in the same valley, takes back the history to 2400 B.C., if not earlier.

Its discovery is also important since it has produced not only pottery, but also several other items of material culture and a large number of skeletons to work out the physical types, population, etc. Its geographic situation in the gateway of ancient India provides it a unique position in the history of migrations of people in 2nd mill. B.C., whether eventually it is identified with a historically known people or not.

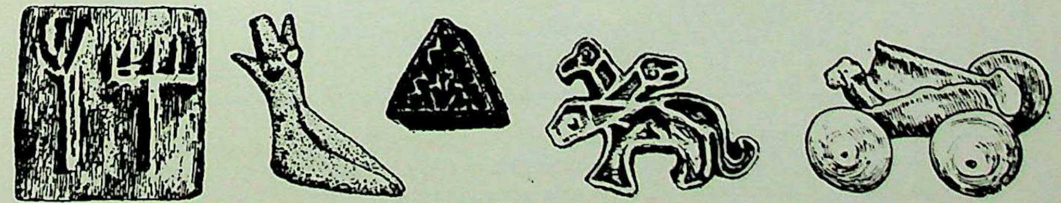
Its importance also lies in its being definitely clubbed with the early levels of Charsada on the one hand and Soviet Central Asia on the other. Its supposed isolation is thus broken, and the one end of the tradition of plain grey ware of the Gandhara Grave or Swat Valley Culture is pushed forward well into the historical period of known events and the other end pushed back into the protohistoric period.

Last, but not the least, it must be clearly noted by all the authors who try to project the theory that the Gandhara Graves belong to the Vedic Aryans, the same Vedic Aryans who are represented by the Painted Grey Ware in the Saraswati and the Ganga basins, that it is not the greyness of pottery, including a couple of shapes, that will add any bone to their theory; the types of graves and cemteries found in the Swat Valley must also be found associated with the Painted Grey Ware. So far the evidence is completely against it. Similarly, architectural features must also show the same feature. All these are sadly lacking.



# THE POLEMICS

S.5.1. ↑
S.5.2. →



S.5.1=Kara Depe (Namazga III) terracotta figurine

S.5.2=An inscribed Harappan seal from a grave at Altin-Depe (Namazga V)
A terracotta female figurine from Gumla (Gumla III)
A terracotta seal from Kara-Depe (Namazga III)
A silver seal with three-headed animal from a grave at Altin-Depe (Namazga V)
A terracotta toy-cart driven by a camel, from Altin-Depe (Namazga V)

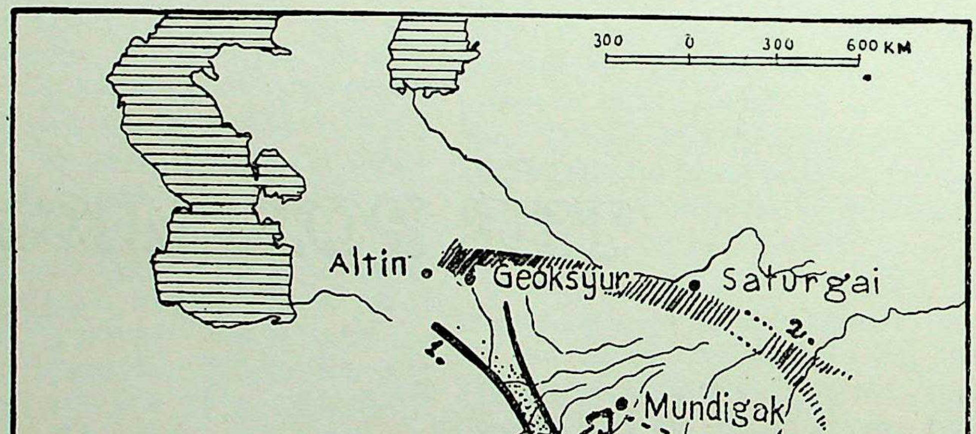

300
0
300
600 KM
Altin
Geoksyur
Saturgai
1.
2.
Mundigak
Gumla
Harappa
Ur
Sokhta
Dam Sadaat
Jalilpur
Gendor

**Fig. S.5.3.** Map showing the directional changes in the movement of cultures in the 4th and 3rd millennia B.C. (1) Movement from Central Asia to India before 2500 B.C. (2) Movement from Indus to Central Asia and West Asia after 2500 B.C.

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

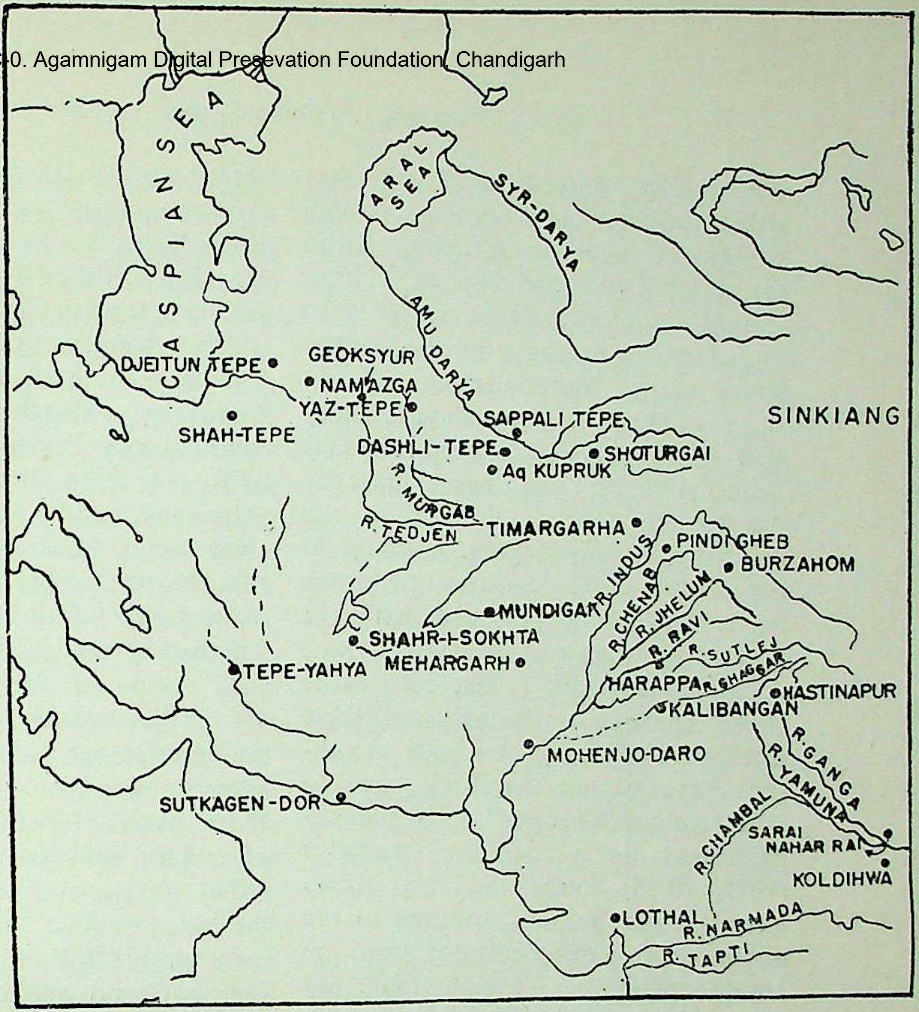

CASPIAN SEA
ARAL SEA
SYR-DARYA
AMU DARYA
DJEITUN TEPE
GEOKSYUR
NAMAZGA
YAZ-TEPE
SHAH-TEPE
SAPPALI TEPE
SINKIANG
DASHLI-TEPE
SHOTURGAI
Aq KUPRUK
R. MURGAB
R. TEDJEN
TIMARGARHA
PINDI GHEB
BURZAHOM
R. INDUS
R. CHENAB
R. JHELUM
MUNDIGAK
R. RAVI
R. SUTLEJ
SHAHR-I-SOKHTA
MEHARGARH
TEPE-YAHYA
HARAPPA
R. GHAGGAR
HASTINAPUR
KALIBANGAN
MOHENJO-DARO
R. GANGA
R. YAMUNA
SUTKAGEN-DOR
R. CHAMBAL
SARAI NAHAR RAI
KOLDIHWA
LOTHAL
R. NARMADA
R. TAPTI

**Fig. S.5.3a.** Map showing important protohistoric sites in Soviet Central Asia and the Indian Borderlands

FOR over half a century, southern Central Asia and the Indian Borderlands have been considered as the 'Refuge Area' for the people coming from West Asia. In time-span the concept covered the Neolithic and Chalcolithic, to some extent even Bronze Age and Iron Age. Jericho, Jarmo, Ur, Kish, Sialk, Hissar Susa, Bakun, etc., were the well-known sites with which the older writers were obsessed since these were considered to be the most ancient civilized settlements of the world of their times. The very title of the most famous book of the thirties, *New Light on, The Most Ancient East* (1934), by Childe reflects this idea. This is further exemplified by a few quotations to which our attention was drawn by Lamberg-Karlovsky (1973). Piggott (1950, 50) observes that "so far as India is concerned, therefore, we must look westwards for the introduction of the arts of agriculture, and it will be seen throughout this book how the Indian material can be properly understood only in terms of its Asiatic setting." Several maps prepared by Braidwood (1952) also reflect the same tendency even though Braidwood kept on insisting that in his personal view the art of agriculture started independently at more than one place, for example, in the Yellow River basin, Mesoamerica and the slopes of the eastern Himalayas. Somehow, for West Asia, Cenetral Asia and South Asia he was never mentally prepared to concede more than one nuclear zone, the Zagros. Coming to the protohistoric cultures the same basic frame-work persisted with the other well-known writers. Thus, Allchin and Allchin (1968, 320) wrote that "Through it (Baluchistan) wave after wave of immigrants and merchants have passed travelling both to and from India proper", as if Baluchistan was just a corridor. Fairservis (1971, 102-5) found the very *raison d'etre* of the Baluchi cultures in the diffusion of farming cultures from the Iranian plateau. Wheeler (1948, 85) observed, that " The Iranian plateau long constituted a main artery in the circulation of Asiatic cultures and India more than most regions has received vitalizing influences from that direction." Harappa culture was also taken to be the outcome of some kind of an 'idea diffusion' from Mesopotamia. Sankalia also belongs to the same diffusionist school. He writes (1974, 1) "Holdich said 'India had been from time immemorial peopled by immigrants. The question arises why should India be always at the receiving end". India of the Holdich's time (1924) included Baluchistan. Recently, Shashi Asthana (1975) too accepted almost the same stand albeit cautiously.

Not that these writers have been totally wrong but possibly they overplayed the situation. Recent excavations conducted at Mehrgarh in the Bolan Valley by Jarrige, at Gumla in the Gomal Valley by Dani, at Shahr-i Sokhta in Iranian Siestan by Tosi, at Tal-i-Iblis in Kerman by Caldwell, at Tepe Yahya in southern Iran by Lamberg-Karlovsky, as also the older excavations conducted by Dupree at Ak Kupruk, by Ross at Rana Ghundai, by Casal at Mundigak, and by Fairservis at several sites in the Quetta Valley now show that this was hardly the case and the older writers failed to understand the situation correctly. On the contrary, each region of the so-called 'refuge area' (Baluchistan, Afghanistan and the Indus plains) was as much a unclear zone as any oft-quoted region in West Asia. Chronological priority of certain sites over the others is a naive argument, more so when the present state of archaeological researches is full of surprises : even a year back no one could visualize a nine metre thick deposit of pre-pottery Neolithic culture at Mehrgarh. However, rarely a culture developed in absolute isolation. But certainly West Asia alone did not provide circumstances for culture-contacts. It is now increasingly clear that it was the Geoksyur Oasis in south Turkmenia which might have played a much more significant role in the development of chalcolithic cultures in South Asia than Hissar and Sialk. But, before we deal with this let us make a few preliminary observations.

Our basic stand, besides the one stated above, is that the change at a very early stage, *i.e.*, from the Aceramic to Ceramic neolithic in the Indian borderlands, was also practically an autochthonous phenomenon as is evidenced from the occurrence of crude handmade utilitarian earthen pots and the absence of wheel-turned sophisticated pottery in the early levels of the Ceramic Neolithic sites. The introduction of painting on pots, to begin with, geometric patterns and later on animals, birds and plants, need not in every case be traced to West Asia, a term which generally stands for Mesopotamia and Western Iran put together. First of all the adoption of simple linear patterns is a logical step from the stage of plain pottery of the Early Neolithic and, secondly, by the time we reach the Early Chalcolithic, mobility of the people in this region seems to have increased manifold for three specific reasons : (a) The newly developed love for certain raw materials, largely required for unproductive luxury items, probably taken by people as status symbol and used in times of need as medium of exchange : for example, lapis lazuli, turquoise, gold and silver; (b) the need felt for certain raw-materials for highly utilitarian purposes, such as copper, tin, arsenic, alabaster, steatite and flint; and (c) the phenomenal increase in the draught animals, such as the ox and bull, even camel and horse.

Increased mobility leads to culture-contact situations which get reflected in cultural assemblages in various ways, one of them being the hybridization in the forms of various items and decorations on them. Imports and exports of actual finished items are often extremely limited, at least that what one finds in archaeological digs. This is the picture of the normal evolutionary process through which most of the cultures at most of the times passed through. But cultures are also marked by sudden changes, sometimes due to natural causes and sometimes due to human interference. Both the situations are reflected in archaeological data; we have only to collect them carefully.

For different kinds of mobility, geographical constraints had to be overcome, which was not always easy to do except by those who constantly lived a nomadic life, or by those few who were especially commissioned to procure specific raw materials. Population increase covers contiguous areas, it hardly leads to colonization of distant lands. There should, therefore, be specific reasons for long distance total movement of a group of people, in normal circumstances it does not happen.

Cultural mobility is, therefore, a very complex affair and requires careful observation of a variety of data—human as well as animal and geographical. The geographical factor has one very important aspect : the hydrological pattern of the country, since the pattern of water-resources determined the pattern of life not only of the human beings but also of the animals and plants. For Central Asia a very admirable attempt has been made by Kemmerih which we are reproducing (Fig. 5.1).

Closely related with it is one of the basic questions : What relation is there between Geography and Culture Interaction? It is extremely vital and should always be taken into account along with human needs and efforts. Let us give an example. There is a vast land between the Kashan Oasis (Sialk) and Baluchistan, including southern Afghanistan, which is, so

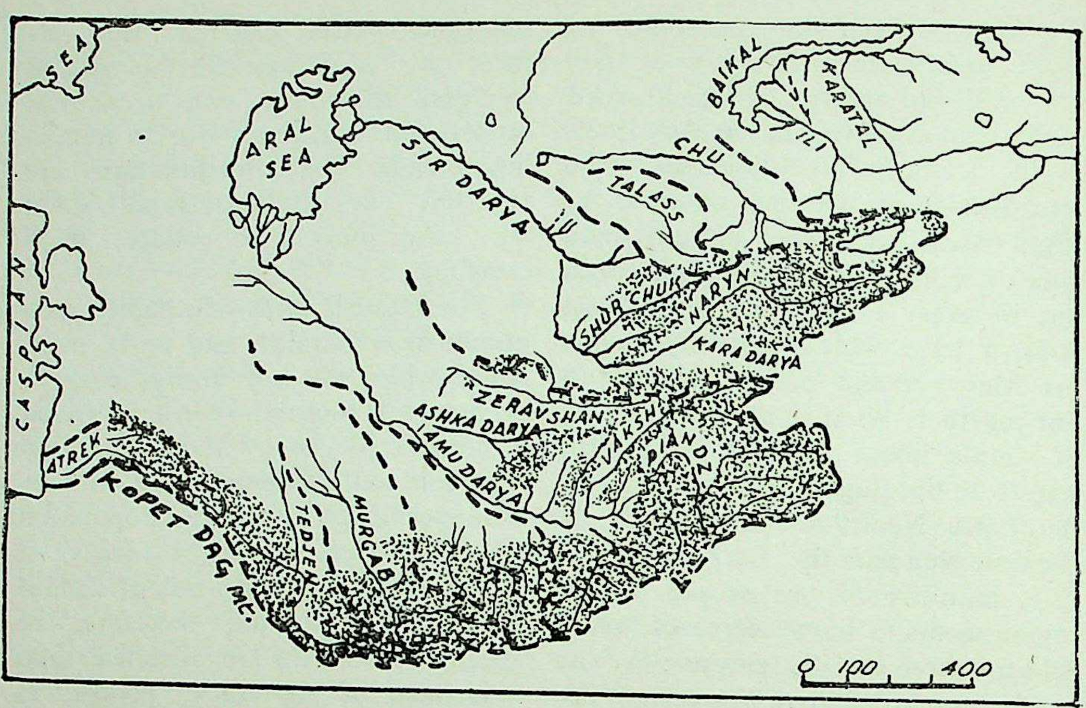


**Fig. 5.1. Schematic veiw of the hydrological and cultural areas in southern Central Asia. The riverine valleys form a sequence of parallel arches whose innermost one can be considered Kopet Dag. Chalcolithic and Early Bronze Age settlements cluster within this inner circle, meanwhile the Amu Darya/Zeravshan system was only randomly exploited by Keltminar and Zaman Baba cultures (From A.O. Kemmerih).** *After Tosi*

far, archaeologically speaking, very much barren. As noted earlier also, the Khorasan mountains, stretching from near about Hissar—Shah Tepe region of north-western Iran to almost the borders of Afghanistan, has so far not yielded the remains of any chalcolithic culture of the fourth and third millennia B.C. Even the environs of Herat has so far been unproductive in this respect. Obviously, Sialk and Hissar should not be taken as areas of intensive culture-interaction with Baluchistan as is often made out. South Turkmenia is certainly nearer home and possibilities of culture-contact situation existing between this region and northern Baluchistan, including Baluchi Afghanistan, has always been greater.

The first coherent attempt, besides the one made by Masson and Sarianidi (1972), to understand the south Turkmenian interaction with the Indian borderlands during the protohistoric period was made by Tosi (1973-74 and 1977). The second was made by Dales (1976). Tosi, in his 1973-74 paper was, however, more concerned with 'Turkmenia—Siestan—south Afghanistan interaction' pattern than the pattern that involved the other parts of the Indian borderland. In the 1977 paper he took the case of Baluchistan and the Indus plains also. Dales, on the other hand, concentrated exclusively on

Baluchistan and the Indus plains. Since the present author has reasons to differ from their conclusions he will first quote the views of these authors. Let us start with repeating the two very pertinent questions which Tosi raised in 1977 (107).

"I. What happened when the Indus Valley Civilization was not developed on the Indus flood-plain and this area was open to cultural interference from the more developed regions in the west, *i.e.*, from 3200 till 2500 B.C.?

II. What happened when the Indus Civilization was developed into the most expanded, uniform and "centralized" state society of pre-Achaemenid times and deeply penetrated westward across both the Makran and the Hindukush as well as along the coastal seaways of the Gulf, *i.e.*, ca. from 2400 to 1800 B.C.?"

Tosi (1977, 108) himself answers these questions. Thus :

"This region (Baluchistan) remained marginal during both phases ...... old and new excavations in Pakistan Baluchistan exhibit a clear predominance of the cultures of the Hilmand Valley and Turan in general for the first half of the 3rd mill. B.C., later being totally overwhelmed by the Harappan influence. ...... Excavations from the earliest levels at Shahr-i Sokhta in 1975 have produced the evidence of synchronism between Proto-Elamitic tablet, Nal Wares, Central Asian pottery and coroplastic traditions (Namazga II-III) together with a clear evidence for cattle cult in the form of clay-pottery figurines. *At least a characteristic cultural trait of the Protoindian culture appears at the end of the 4th millennium with a writing system by*

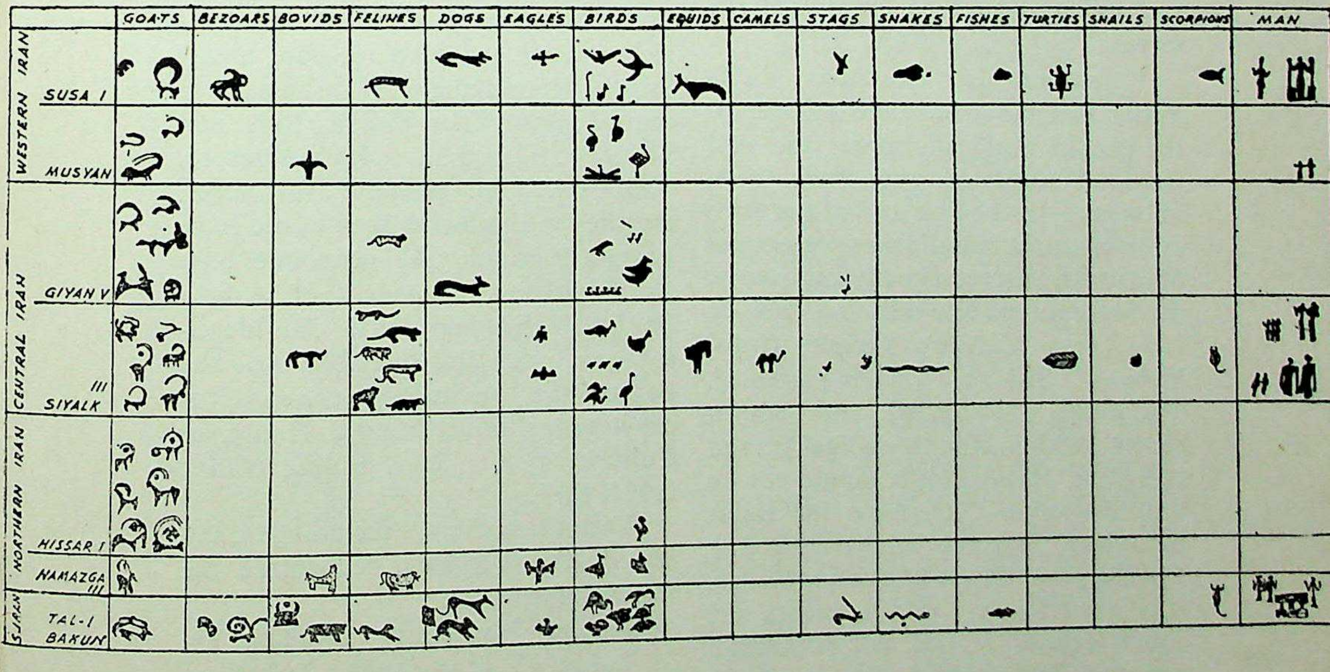

GOATS
BEZOARS
BOVIDS
FELINES
DOGS
EAGLES
BIRDS
EQUIDS
CAMELS
STAGS
SNAKES
FISHES
TURTLES
SNAILS
SCORPIONS
MAN
WESTERN IRAN
SUSA I
MUSYAN
CENTRAL IRAN
GIYAN V
III
SIYALK
NORTHERN IRAN
HISSAR I
NAMAZGA III
S.IRAN
TAL-I BAKUN

Fig. 5.2. **Faunal representations on pottery, 4th millennium B.C.** *After Tosi*

*many supposed to have been instrumental to the invention of Indus script, the proto-elamitic*" (Ital. ours).

Then he talks about three ecosystemic units :

(*a*) The *eastern Iranian settlement area* (Hilmand middle-lower valleys; Kopet Dagh, Tedzen delta, Damghan basin, southern Kerman). For this he has produced a pictorial chart of birds, animals and fishers as found depicted on pottery at different sites (Fig. 5.2).

(*b*) The *Baluchistan orographic belt*, spreading from Waziristan to the Dasht Valley in Makran.

(*c*) The *Indus Valley plain*

"The first and third areas are to be regarded as 'central areas' of urban development, versus the second one which we classify as frontier or interference zone, subject to different degrees of marginality for the whole of the period concerned."

Lamberg-Karlovsky (1973, 17) observes :

"Mesopotamia, Southern Turkmenia, and the distinctive culture of the Persian Gulf, all border the vast Iranian Plateau and were open to its influence. In the first half of the third millennium, urban life was present not only in Khuzistan, directly exposed to the Mesopotamian world, but also in Fars (Tepe Malyan), Kerman (Iblis, Yahya), Siestan (Shahr-i Sokhta), Turkmenia (Namazga) and south-central Afghanistan (Mundigak)" and therefore, Mesopotamia should not be looked upon as the source for Indus urbanism. But, he adds (1973, 19), "In the present state of our knowledge, it is hard to say what influence the urban centres of Iran and Turkmenia may have had on the formation of the Harappan Civilization."

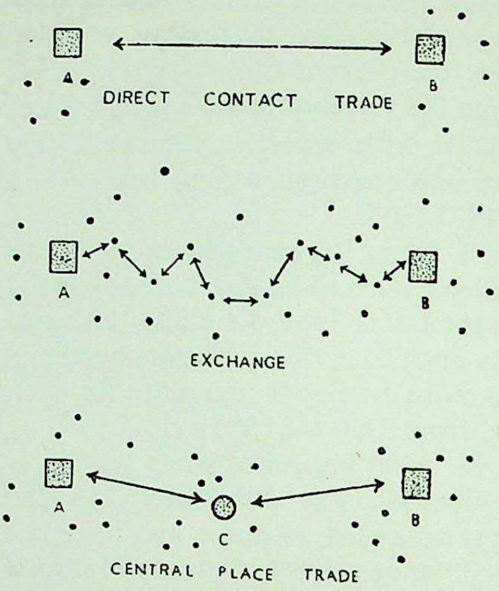


**Fig. 5.3. Figure showing the concept underlying 'Central Place' Theory.** *After Lamberg-Karlovsky*

He invokes the Central Place Theory (distribution of desired goods, brought at one place from resource-rich areas to the resource-poor areas) for the development of urbanism at central places like Yahya, Iblis and Sokhta (Fig. 5.3). He observes, "Mesopotamian demand for lapis, steatite and mineral ores would have provided in part the economic base for the urban development of Shahri-i Sokhta, Yahya and Iblis. An identical role can be ascribed to the Baluchistan cultures *vis-a-vis* the development of the Mature Harappan Culture in the Indus Valley (1973, 18)".

Various authors, including Lamberg-Karlovsky, have recognized the following equation :

Jemdet Nasr/Early Dynastic I= Yahya IV C = Shahr-i Sokhta I = Namazga III = Gumla II = Mundigak III.

But Lamberg-Karlovsky rightly observes (1973, 20) "the material parallel : ceramics and seals, which provide the comparability are *unequivocal* but *rare* in the total inventories of the respective sites; (ii) and secondly *numerous parallels exist between Shahr-i-Sokhta I and Namazga III;...there are none, however, linking Yahya IV C with Namazga III*...suggesting regionalization...a persistent tendency towards distinctiveness. This is as important as the shared materials which indicate contact. For example Indus seal is square, the Persian Gulf seals are round and in Mesopotamia they are cylindrical, while the function of seals would appear to be the same in all areas." And finally, there is the total absence of a dominant culture over the vast area between Mesopotamia and the Indus valley which prompted authors to look towards Mesopotamia for the *idea* of urbanism. Dales (1976, 67) makes the following observation "*At about 2500 B.C. there was a dramatic shift in trade routes and interaction spheres in these regions*. The first half of the third millennium was characterized by wide spread sharing of technologies, aesthetic and cultic knowledge and practices...Then *with the middle of the third millennium there was an abrupt and*

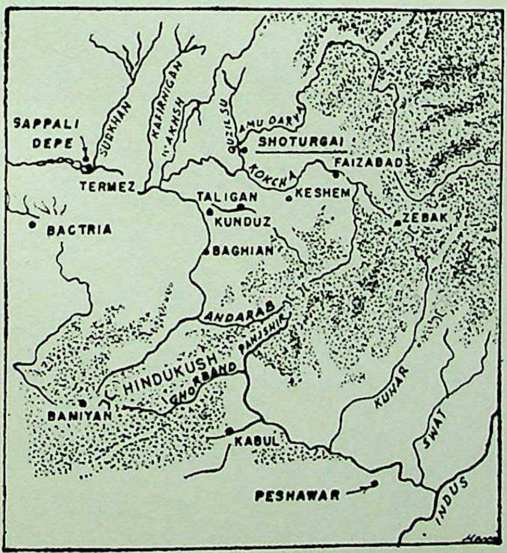

SAPPALI DEPE
SURKHAN
KAFIRNIGAN
VAKHSH
QUZIL SU
AMU DARYA
SHOTURGAI
FAIZABAD
KOKCHA
TERMEZ
TALIGAN
KESHEM
KUNDUZ
ZEBAK
BACTRIA
BAGHIAN
ANDARAB
PANJSHIR
HINDUKUSH
GHORBAND
BAMIYAN
KUNAR
SWAT
KABUL
PESHAWAR
INDUS

**Fig. 5.3a. Map showing the location of Shoturgai and Sapalli Tepe.** *After Lyonnet*

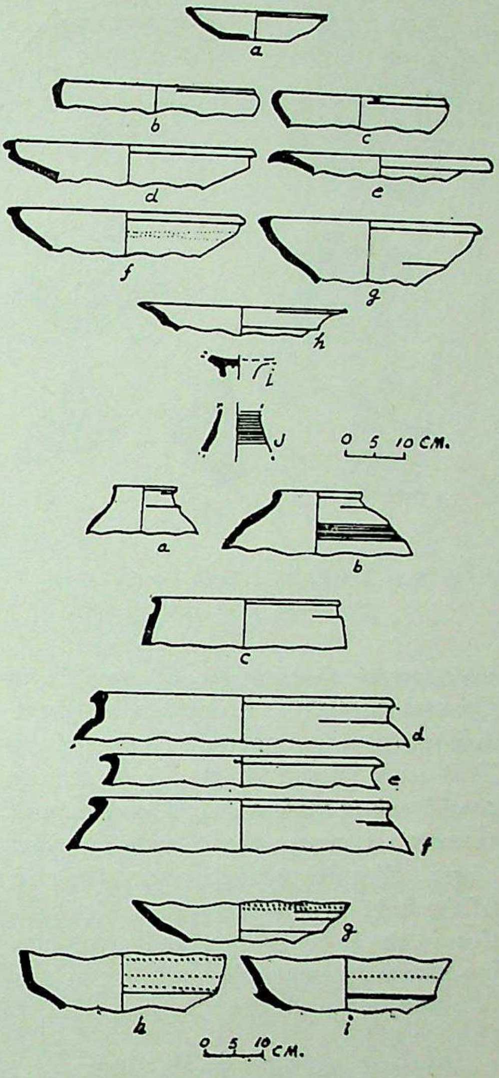

a
b
c
d
e
f
g
h
i
j
0 5 10 CM.
a
b
c
d
e
f
g
h
i
0 5 10 CM.

**Fig. 5.3b. Pottery from Shoturgai**

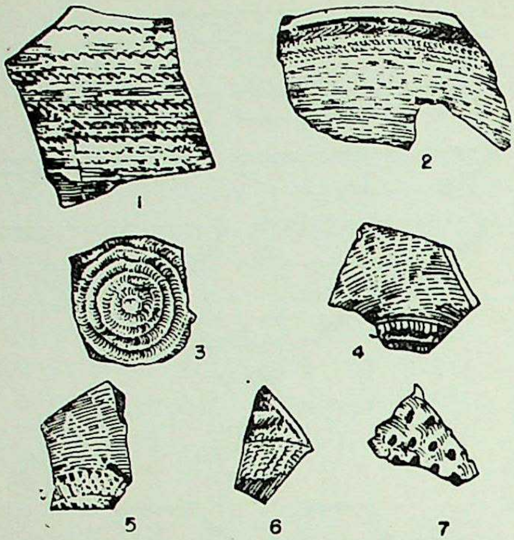


**Fig. 5.3c. Harappan related pottery from Shoturgai,** *After Loyonnet*

*wide-spread abandonment of sites* from Central Asia through Siestan, southern Afghanistan and northern Baluchistan. This was accompanied by an almost *total break in trade and significant cultural interactions across these northern land routes*. Simultaneously we see the rise of the fully urban Harappan Civilization in the Indus Valley and establishing of coastal seatrade activities in the Arabian Sea and the Persian Gulf." (Ital. ours).

We will now take up these observations for close scrutiny.

Dales' thesis of shift in the trading pattern and trade routes, from overland to coastal, in the context of 3rd millennium appears to have emerged out of the non-availability of two major groups of data to him—(a) that at Shorturgai, on the Oxus (Fig. 5.3a), there is a cluster of at least seven Mature Harappan settlements (Fig. 5.3d), which is likely to have controlled most of the trade in mineral resources coming from northern Afghanistan (lapis lazuli) and Soviet Central Asia (turquoise, tin and lead) and, (b) that at Altin-Depe the Soviet archaeologists have discovered from Period V levels, which were contemporary with the Mature Harappan levels in the Indus plains, a typical Harappan square seal inscribed with Harappan characters. There is, therefore, absolutely no question of abandoning the northern overland routes in favour of southern sea-routes in the second half of the third millennium B.C.

The abandoning of all major sites in the Indian borderlands around 2500 B.C. does not appear to be correct although it is true that a number of sites in Baluchistan as well as in Harappan India (Gupta 1975-1976) were deserted, some temporarily, like Kot

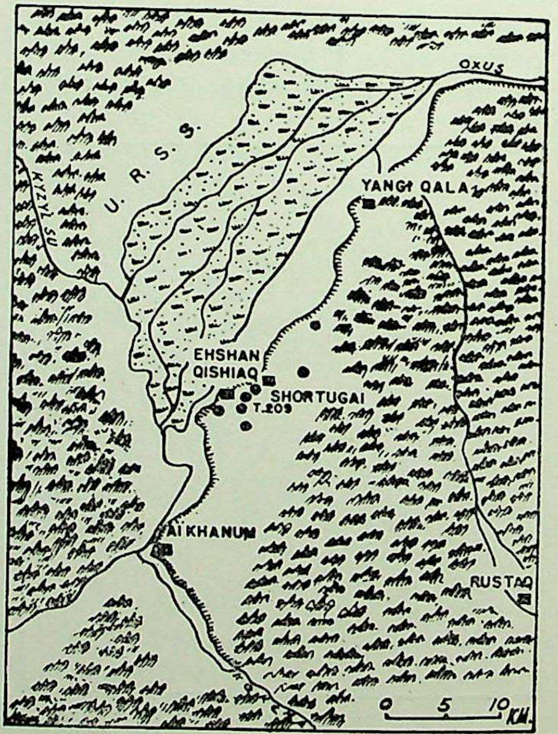


**Fig. 5.3d. Map showing different stations of the site Shoturgai.** *After Lyonnet*

Diji, Gumla and Kalibangan, while others permanently, such as Jalilpur and Sarai Khola. It is extremely doubtful if Yahya, Sokhta, Namazga, Altin, Mundigak, etc., were at all deserted as such. A certain amount of decline in their cultural equipment is discernible but, to us, that has to

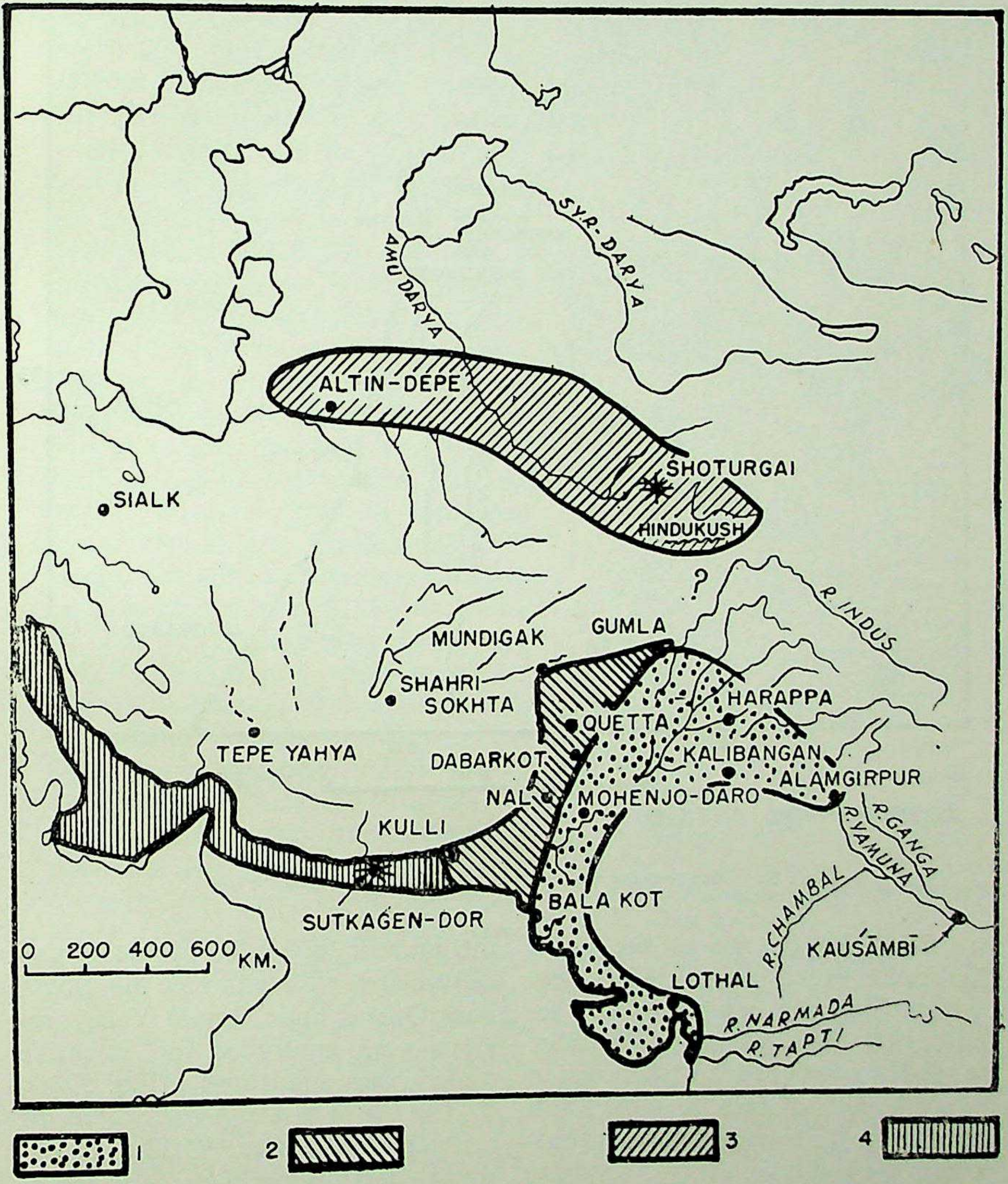

SYR-DARYA
AMU DARYA
ALTIN-DEPE
SHOTURGAI
SIALK
HINDUKUSH
?
R. INDUS
MUNDIGAK
GUMLA
SHAHRI-SOKHTA
HARAPPA
QUETTA
TEPE YAHYA
DABARKOT
KALIBANGAN
ALAMGIRPUR
NAL
MOHENJO-DARO
R. GANGA
R. YAMUNA
KULLI
R. CHAMBAL
BALA KOT
SUTKAGEN-DOR
0 200 400 600 KM.
KAUSAMBI
LOTHAL
R. NARMADA
R. TAPTI
1
2
3
4

Fig. 5.4. 1. Harappa Culture-area; 2. Area of Intensive-interaction for men and material; 3. Marginal interaction for imports of certain raw materials in which it was rich but the Indus plains were poor; 4. Area of marginal interaction for certain finished goods as well as raw materials

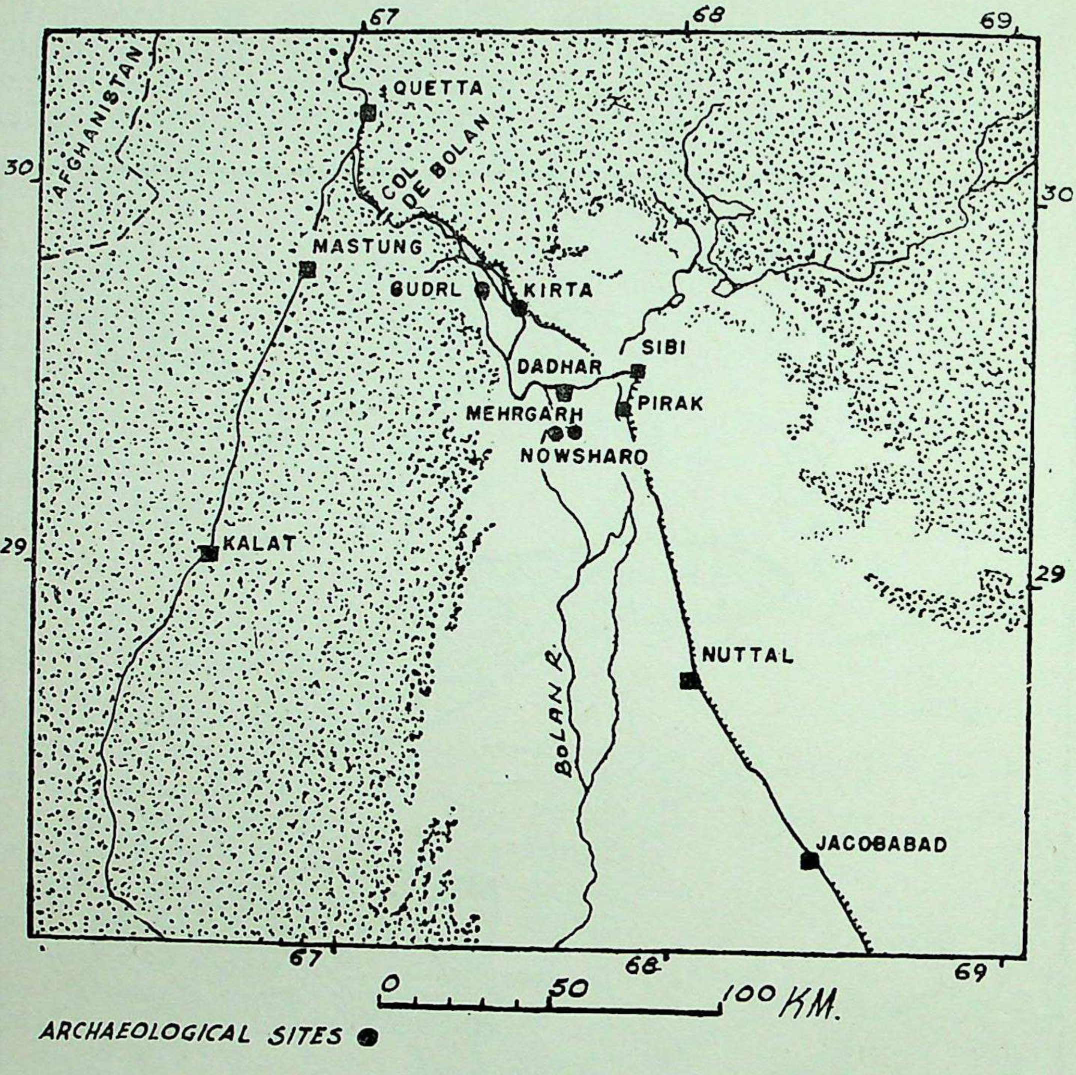

67
68
69
30
29
AFGHANISTAN
QUETTA
COL DE BOLAN
MASTUNG
GUDRL
KIRTA
SIBI
DADHAR
PIRAK
MEHRGARH
NOWSHARO
KALAT
NUTTAL
BOLAN R.
JACOBABAD
0
50
100 KM.
ARCHAEOLOGICAL SITES ●

**Fig. 5.5a. Map showing the location of Mehrgarh.** *After Jarrige*

be attributed to the rise of the Indus Civilization which overwhelmed them by snatching the control of the resource-rich areas from the hands of the pre-Harappan peoples. Shoturgai in the north and Sutkagendor in the south appear to be the two most powerful outposts of the Harappans (Fig. 5.3b and c) through which they controlled their trade with distant lands. Dabarkot, Gumla, etc., appear to be the sites on the immediate border of the Indus culture-area through which the Bolan Pass, Quetta and Gomal Valley regions were controlled for intensive trade in men and material (Fig. 5.4).

The use of MASCA corrections for arriving at the true $^{14}C$ dates is extremely tempting in many cases where they tally with the known historical data but the trouble arises when one becomes selective. Unfortunately, when it is used uniformally, taking all the $^{14}$C dates into consideration, they start giving extremely divergent pictures. Dales' chronological framework as given in 1974 and 1976 is extremely admirable and make sense but only in patches. Possibly, scientists have yet to give us some better correction values.

Tosi suffers from the passion that he has, of late, developed for Shahr-i Sokhta. Although he knows it well that there is practically nothing at Sokhta which may be called Harappan; there is hardly a couple of items at Tepe Yahya which are Harappan; there is very little Harappan at Mundigak and at Namazga IV, yet he tries to project the idea (also shared by Lamberg-Kalovsky) that the Harappan Urbanism owes its first seeds to east Iranian and Turkmenian urbanism. Nothing could be more far fetched than this (Gupta 1975-1976) since by 2500 B.C. all these sites witnessed a definite decline and could hardly inspire urbanism in the Indus Valley. Proto-Elamite tablets are found confined to the early levels (3200 B.C.) of Sokhta Pd. I and IV C levels of Yahya. How could this become a model for the Harappan writing which developed at least 700 to 500 years later? Further, Baluchistan and Afghanistan were neither the 'marginal areas' in the sense Tosi and Lamberg-Karlovsky take them to be, nor the 'refuge area' nor the 'corridor'. It, in fact, witnessed a continuously developing cultural process, right from the Neolithic through the Bronze Age. At sites like Mehrgarh, it is now more than clear (Fig. 5.5a and 5b). The basic character of the cultures of Baluchistan was determined, as elsewhere, by the environmental conditions peculiar to this region and the kind of efforts that men made to tackle the natural constraints. Therefore, if Baluchistan and Afghanistan could not develop even a single Harappa or Ur, none of the geographical regions in eastern Iran and Turkmenia could develop it. All of them witnessed the rise in culture only upto the Proto-urban stage marked by one or two monumen-

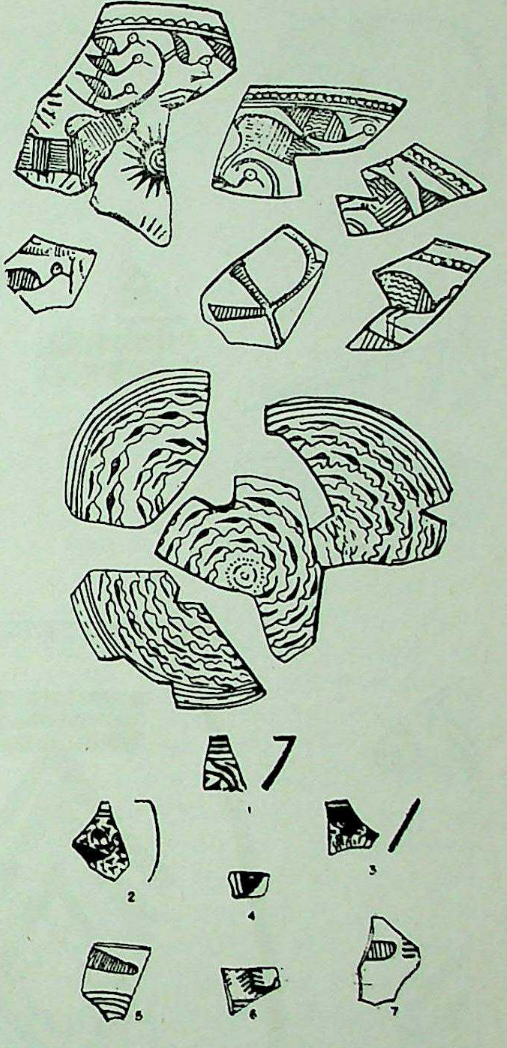


**Fig. 5.5b. Harappan pottery from Mehrgarn.**
*After Jarrige*

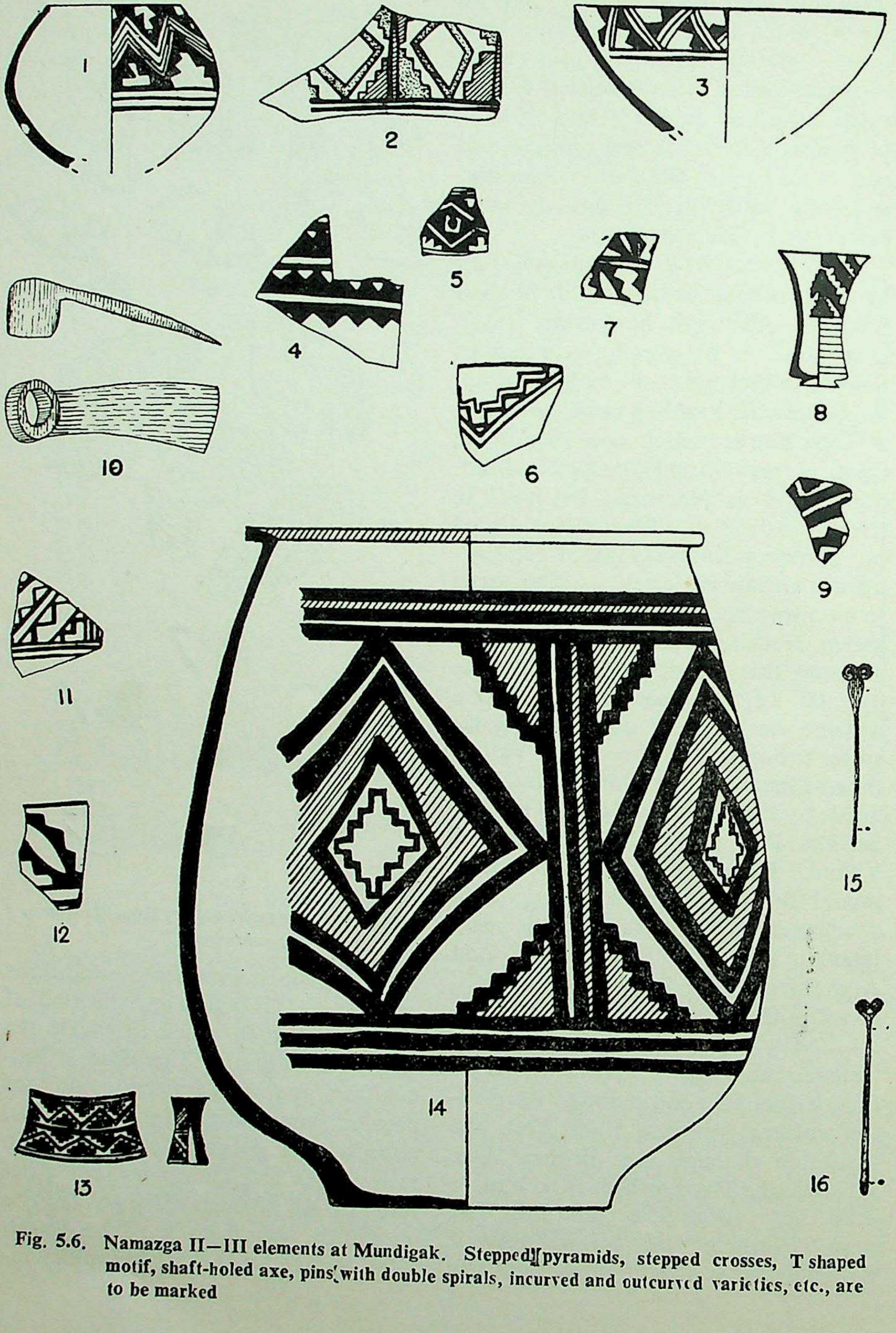


**Fig. 5.6.** Namazga II—III elements at Mundigak. Stepped pyramids, stepped crosses, T shaped motif, shaft-holed axe, pins with double spirals, incurved and outcurved varieties, etc., are to be marked

tal structures, like Mundigak (Palace) Altin-Depe (Ziggurat) Shahr-i Sokhta (Burnt House) Mehrgarh (monumental brick-platform with a colonnade of square mud-brick pillars in its front). The value-judgement of a kind which ignores environmental factors and the peculiar nature of human response to them is an extremely dangerous weapon in the hands of historians.

Tosi had posed the questions under the category 'what happened and when'; we would like to put two questions to our source-material in the category 'why did it happen the way if happened'. Thus :

1. Why the cultures in the first half of the 3rd millennium B.C. shared their technologies, aesthetics and cultic elements more intimately than they appear to have done in the second half of the 3rd millennium B.C.?

2. Why the cultures surviving in the second half of the third millennium B.C. not got inspired by the Indus Civilization in envolving the full urban stage?

The first question is partly valid and partly not although the whole of it at the first sight appears to be valid. It is so because the archaeological evidence clearly shows that throughout the third millennium these cultures remained in existence and also shared each others' elements, even though some of the sites were temporarily, or permanently, deserted for reasons not absolutely clear to us at the present stage of our research. The quantum and form of exchange may have changed in the course of time but the phenomenon never ceased to exist. If in Namazga III times the Turkmenian elements came down, directly or indirectly, upto Mundigak (Fig. 5.6) Gumla, and even Jalilpur (as characteristic pottery and terracottas would show), the situation kept on existing in the Bronze Age—joint legged terracotta figurines are found throughout the life-span of Mohenjodaro; and Central Asian raw materials came to Baluchistan and the Indus Valley both; Shahr-i Sokhta kept on using the Turkmenian type of seals with raised outline even in the later part of the 3rd millennium B.C. If Tepe Yahya did not directly interact with south Turkmenia in the first half of the third millennium it did not interact even in the second half. Therefore, the overall pattern of interaction of cultures in this part of the world remained the same throughout the third millennium although, as is natural, emphasis and preferences kept on changing according to the factors like 'demand and supply' (Asthana 1978 and 1978a). The trouble with all of us has been on one count : once the Harappan gamut of quantitatively large and qualitatively superior objects is found, the small items like terracotta whorls, figurines, etc., and also pottery forms, which we considered important enough in the context of the early third millennium B.C., are no more given the same importance.

But what is partly valid in our first question is that due to the phenomenal rise of the Harappan cities there has been a reshuffling in the pattern of relationship amongst different cultures on the Indian borderlands. There occurred a great thrust from the east to the west. Not only that the cultures existing prior to the emergence of the Harappan cities slowly and gradually got completely submerged in the vast ocean of the new civilization, those which could manage to survive remained in backwaters, like the Sothi culture at Siswal and Mitathal in the Indo-Gangetic divide (Suraj Bhan 1977).

The answer to the second half of the question relating to 'why', therefore, centres round the absence of the phenomenon of City Civilization in the first half of the third millennium B.C. and the emergence of the Urban Civilization of the Indus in the second half of the same millennium. In other words, during the early third millennium there existed a situation in which all the cultures were qualitatively equals, all were expanding, all needed each others' help, none came in the way of others' movement as well as growth, while in the second half of the third millennium all of them had to deal with a situation in which a single, really superior colleague (the Indus), had emerged and threatened the equillibrium of the earlier stage.

The answer to the other question is not easy to give since there may have been various human as well as environmental constraints to allow the necessary stimulus from the Indus cities in the make-up of the non-Indus towns in case they wished to develop Harappan-like cities. But one thing that appears to us as of great importance, as said earlier, is the shift in the control of the trade-routes and resource-rich areas from the hands of many to the hands of one. That possibly explains the decline in the lapis industry at Shahr-i Sokhta in the later part of the third millennium B.C. Lamberg-Karlovsky's 'Central Places' lost the role they played in the pre-2500 B.C. period. His model appears to be redundant when tried in the changed circumstances of the second half of the third millennium B.C.

Having emphasized the need for a drastic change in our approach to Baluchistan and other areas on the Indian borderlands and having made it clear that there was basically no status wise difference between one region and the other belonging to the Indian borderlands in the pre-Harappan times, we are now called upon to work-out the cultural dynamics of the region of at least three millennia—from the 4th to the 2nd.

We begin with our note of complete agreement with Dales (1976, 68) when he makes the observation that "much of the 'confusion' concerning the internal developments and the 'international' interrelationships during the third millennium B.C. revolves around the problem of chronology—both relative and absolute. An established, accepted chronology is the single most important basic element in setting up a developmental paradigm and in problem solving related to the paradigm." Here is re-produced the chronological framework worked out by Dales (see the chronological chart (Fig. 5.7).

Dales, since 1964 (257-284), has been busy in working out an acceptable "phase" paradigm, although in his own words only, 'as a useful heuristic device' (1976, 70-71). Since this is now widely known paradigm we shall step by step follow it and give our observations on matters of vital importance.

## PHASE A

It encompasses the whole Stone

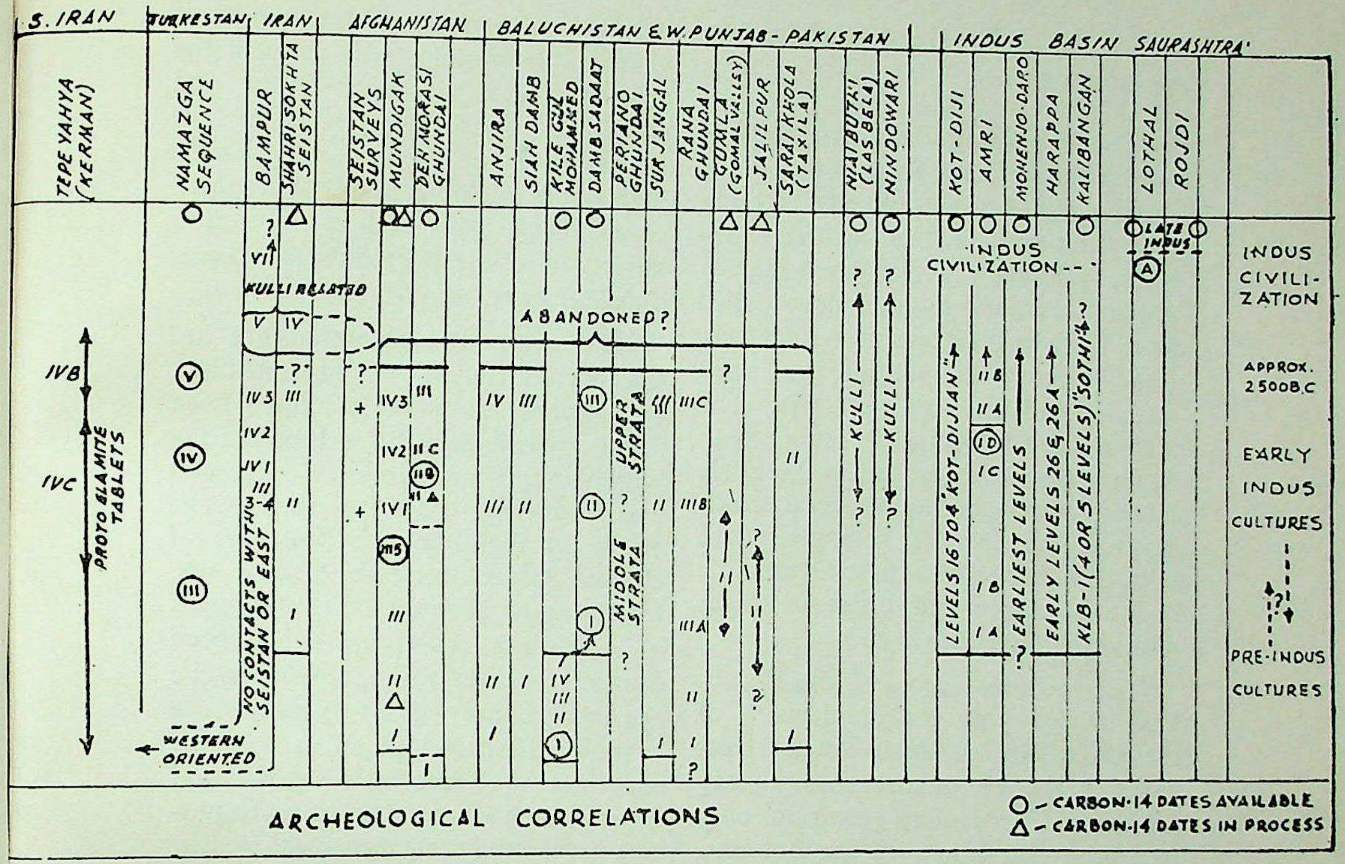


**Fig. 5.7.** Chart showing correlations of different cultures based on some MASCA corrected $^{14}$C dates. *After Dales* (The present author, however, does not agree with it in the case of Namazga sequence.)

Age development. For purposes of this volume Neolithic cultures may be included, since Palaeolithic and Mesolithic have been dealt with in Volume I, we will leave these periods for the present. We will, in the light of our observations made above, start with Baluchistan and Afghanistan.

As said at the outset, Baluchistan and Afghanistan have traditionally been visualized 'as refuse areas' in archaeological literature. Even at the risk of repetition, we contest it, and also propose, primarily on the basis of evidence from Ak (Aq) Kupruk in northern Afghanistan (Dupree 1964) etc. and Mehrgarh in Baluchistan (Jarrige and Lechevallier 1977) that the region as a whole could independently witness the transition from mesolithic to neolithic and thence to chalcolithic. There is no great value in the general emphasis on the arid character of this land : the rivers in the area, the Oxus, the Helmand, the Zhob and others could sustain perennial agriculture in their valleys, perhaps on a small scale but effectively enough to generate cultural growth in these basins. We have, therefore, another nuclear zone for the Neolithic in Baluchistan and Afghanistan, much beyond the Zagros.

## Northern Afghanistan

### AK KUPRUK

The important site in Afghanistan is near the town Ak Kupruk in the northern region. Louis Dupree laid trenches in three rock-shelters (called Ghar-i-Mar or Snake Cave; Ghar-i-Asp or Horse Cave, and another cave called Skull Cave by the excavators since here was discovered a cemetery of ten burials) and one open-air site. The archaeological remains begin with Mousterian tools and end in the Early Islamic pottery but with several stratigraphic gaps. We are here concerned with the change from the Mesolithic to the Neolithic and different stages within the Neolithic itself.

The northern slopes of the Hindukush merge into the flood-plains of the Oxus. It has some small rivers rising in the Hindukush and joining the Oxus. The region gets rain only in winter; the summers are hot and practically rainless. It is in the winter rains that the narrow corridor, that exists between the rivers and the mountains, becomes fertile and it is possible that wheat and barley grew in the Neolithic period in varieties which were easily domesticated. The same applies to cattle, goat, sheep, etc., which were also domesticated here at a very early date. The evidence for all these comes from the Ak Kupruk sites. Broadly, the sequence of Neolithic cultures at this site includes an aceramic complex, followed by a ceramic complex. The aceramic level has further been devided into Phase A, earlier, and Phase B, later.

Therefore, the change that we are trying to find out begins in Phase A of the Aceramic period dated to 8000 B.C. (10,210 ± 235 B.P.), a date which is comparable to many early dates of the Neolithic levels in West Asia and elsewhere. Although the remains of houses have not been found, hearths and floors yielding bones of domesticated sheep, goat and cattle, and a variety of domesticated horse (*Equus Caballus*) have been found.

Similarly, although agriculture has not been attested, pecked stone hoes, celts, querns and pounders have been found, which may have been used in harvesting the wild varieties of cereals and reducing them to flour. The excavator mentions the discovery of Upper Palaeolithic-type blade tools. Interestingly enough, a fragment of a steatite bowl has also been found. On the whole, therefore, we are here dealing with a very early stage of settled life depending on a kind of economy in which wild cereals and domesticated animals played an important role; trade in terms of steatite or steatite bowls was obviously restricted. Art activity was confined to a pebble of limestone which was shaped into a man's head with rough facial features incised with a burin.

Phase A appears to have been followed by some climatic change as has been inferred by the excavator on the basis of a change in soil. Phase B has yielded the skeletal remains of the same species of domesticated animals as were encountered in Phase A levels. The stone tools also remain the same with large numbers of backed blades, burins and side and end-scrapers. Bone points and incised bone spatulas are, of course, the novelties. One most significant find is, however, a crude stone sculpture—that of a pregnant woman. Phase B is bracketed between

7000 and 5000 B.C. (8650 ± 100 B.P. and 7220 ± 100 B.P.)

The Aceramic Neolithic was followed by Ceramic Neolithic. Two kinds of pottery were found—(a) crude, soft, chaff, limestone and crushed-sherd-tempered ware in which pots with flat bases and simple rounded rims have been found, (b) a better fired ware with pots like simple bowls and jars, decorated with zig-zag incised designs. Dupree has compared them with the Neolithic pottery of Soviet Central Asian steppes, dated around 500 B.C. though we are not sure about it. Stone tools of the earlier tradition continued to be made. We have here flint cores, blades, sickle blades, perforators, end-scrapers, etc. Animal bones recovered clearly prove that sheep, goat, cattle and onager(?) were domesticated. But probably a much more significant discovery in these levels is a fragment of beaten and embossed bronze sheet along with some fragments of a bronze rectangular rod at Ghar-i-Mar. Their tin content has been rated to 7 per cent. The Ceramic Neolithic of Ak Kupruk belongs to the time bracket 5500-4000 B.C. (7030 ± 100 B.P. and 6310 ± 70 B.P.), while the metallic objects are dated to 5500-5300 B.C. Bronze objects of such an early date are not known from West Asia although copper objects have been found in the 7th millennium B.C. levels at Cayonu in Turkey and Tal-i-Iblis in Kerman.

Then the site was deserted for a very long time. The Late Neolithic people of 2nd millennium B.C. (3780 ± 130 B.P.=1780 B.C.) occupied a site called Dara-i-Kur, near Chenar-i Baba Darvesh. It is called Goat Burial Neolithic because in this site ceremonial burials of goats were found. The grey ware from this site has sometimes been compared with that found at Burzahom, near Srinagar.

We have thus in northern Afghanistan a unique situation with regard to Neolithic which began around 8000 B.C. It continued upto 2000 B.C. or so, passing through three different stages : aceramic, ceramic and chalcoltihtic. Louis Dupree, therefore, rightly observes :

> "Aq Kupruk may prove to have been in the zone of the early domestication of plants (wheat/barley) and animals (sheep/goat/cattle). Undoubtedly, there is hardly any chronological priority for West Asia over south Asia in the sphare of the beginning of Neolithism."

## Northern Baluchistan

### MEHRGARH

Although Afghanistan found a definite place on the map of Early Neolithic in 1972, yet Baluchistan remained outside it till recently. The discovery of a pre-pottery neolithic complex at Kile Gul Mohammad near Quetta had not taken us sufficiently near to Afghanistani, West Asian and Central Asian examples and all along we have been thinking that possibly the Neolithic in Baluchistan is very late, not earlier than the second half of the fourth millennium B.C., at any rate.

However, in January 1977 a startling discovery was made by J.F. Jarriage at Mehrgarh, located some 150 km. south-east of Quetta on the Bolan. It has yielded the remains of a pre-pottery neolithic culture, called Aceramic Neolithic Culture (the aceramic neolithic cultures are sometimes called 'Proto-neolithic' also).

The site of Mehrgarh spreads over 100 acres but during the neolithic period, only the northern and eastern sides of the site were occupied; the other sides were inhabited during the succeeding period, the chalcolithic. The interest in the neolithic settlement of this site lies in several factors. The first is its location, it lies at the head of the Bolan Pass, the most popular route connecting India with West Asia throughout history. Secondly, it is on the bank of a perennial river, *i.e.*, the Bolan. Thirdly, the cultural deposit is abnormally thick (some nine metres) in comparison with other neolithic deposits in South Asia. Fourthly, till a very late level, it is completely devoid of pottery. Lastly, from the earliest period the houses were made of mud and mud-bricks.

The excavations were undertaken near the edge of the mound overlooking the river. Two structural levels were uncovered of which the lower one is better preserved. In this level a small quadrangular room communicating with another one lying outside the limits of the dig has been exposed. The walls were built of mud-bricks having finger marks; significantly, the marks of this kind have not been noticed on any of the bricks used in the structures of the chalcolithic period. One polished stone-axe is said to have been found close to the surface while two others were picked up on the surface itself. It is likely that these three axes formed part of the stone-tool assemblage of this culture. From the excavations a few stone adzes have also been recoved. This assemblage also includes finely retouched small blades and microliths which may demonstrate the fact that the Mehrgarh neolithic followed closely the mesolithic. The absence of pottery may also support this view. The neolithic assemblage of this site also includes many grinding stones and pestles, fragments of stone bowls, one ochre coloured, stone spatula, decorated with incisions, and several bone tools of good quality. Stone beads have also been found.

But possibly much more significant is the discovery of a large number of cattle bones which proves beyond doubt that domestication of animals formed a major source of the economy of the people.

So far no information has been received on plants and cereals but the very presence of grinding stones, pestles and stone bowls shows that agriculture may have been practised. Our guess is that the oldest occupational stratum is dated to the 6th or 7th millennium B.C., if not earlier.

## Mehrgarh Early Chalcolithic

In the southern part of Mehrgarh, the excavators found the aceramic deposit overlaid by a chalcolithic deposit yielding an enormous quantity of potsherds, 50 per cent of which were wheel-thrown. It is significant to note that some of these pot-sherds were decorated with a few geometrical designs painted in black which are comparable with some of the crudely painted geometric motifs found on Kile Gul Mohammad II handmade unslipped pottery. The same observation applies to some of the mat-impressed pottery. It may be noted that Rana Ghundai I also yielded flakes and blades of chert along with bone points or awls and handmade pottery decorated with geometric designs of comparable compositions. Loralai I is also comparable with it. It means that we are here in the chalcolithic period dated to the first half of the 4th millennium B.C. It is also significant to note that the later levels of the chalcolithic (Mehrgarh II) have yielded painted pottery of Early Togau type displaying fine caprids and birds.

But what is much more important to note at Mehrgarh is the discovery of a mud-brick house in the lowest levels of the chalcolithic whose floors were coloured with red ochre. Nearer home, this has been a characteristic feature of the Ceramic Neolithic and Early Chalcolithic houses in south Turkmenia. Associated with this floor, three atypical pot-sherds, presumably handmade, were found. Does this level, therefore, belong to the transitional phase, from the aceramic neolithic to the ceramic neolithic? Are the atypical pot-sherds the products of a purely local experiment in pottery making? Should we take it as a distinct stage of culture? It is probably too early to answer these questions either way. But it may be noted that along with the early pottery a number of bone tools and stone blades have been found and all of them show affinities with the bone and stone tools of the earlier aceramic neolithic stage. It may mean that although at Mehrgarh we may or may not be missing a stage in between the aceramic and early chalcolithic, one may reasonably argue that at the end of the aceramic stage, a culture-contact situation arose in which progress was accelerated and many things happened in quick succession, often dove-tailing into one another. Thus, south Turkmenian neolithic fashion of painting the floors with red ochre reached Mehrgarh.

Sometimes during this period, neolithism appears to have arisen locally or moved into the Gomal Valley from some other area, reaching sites like Gumla. The Neolithic occupation (period I), laid on the virgin soil, has not yielded any structural remains but community ovens, bones of domesticated animals (cattle) and microlithic blade and flake tools as also saddle querns, grinding stones, pestles, balls, pounders, etc., go a long way to show that Mesolithism was left behind by the people sometime back and neolithism was ushered in. It is likely that it inspired a chain reaction which gave birth to the neolithic complexes of Sarai Khola and Jhang in the Potwar region, and Jalilpur, in District Multan, some sixty km. south of Harappa. But it is only a guess because beyond Gumla, eastwards, this neolithic is associated with pottery. There may be a few other sites also yielding polished stone-axes, chert blades, bone tools and handmade coarse and burnished wares, some of which resembled the Kile Gul Mohammad Ware of priod II, as they do at Sarai Khola. Mehrgarh II may, therefore, belong to the Kile Gul Mohammad II phase.

However, it is possible that Mehrgarh II is divisible into 'lower' and 'upper' levels, and the lower levels belong to early Kile Gul Mohammad II times or a little earlier. The situation we visualize is as follows :

(a) Mehrgarh I lower level, (b) Mehrgarh I, upper level, + Gumla I + Kile Gul Mohammad I, lowest

(c) Mehrgarh II, lower levels (d) Mehrgarh II, upper levels + Kile Gul Mohammad II+Rana Ghundai I+Loralai I+Sarai Khola I+ Jalilpur I (e) Early Togau. These are the five successive stages, 'a' being the earliest and 'e' latest. From 'e' we enter into the chalcolithic.

## SOUTH ASIA VIS-A-VIS WEST ASIA AND CENTRAL ASIA

Now, how this situation of the 6th and early 4th millennium B.C. fits into the overall picture of West Asia and Central Asia?

To begin with, so far no site comparable with Mehrgarh I has been found anywhere in Iranian Baluchistan, Seistan, Afghanistan and Central Asia, and also the Indus basin. It is only when one goes further west to the Zagros mountains that one comes across with situations like this. But the Zagros is too far to be considered the nuclear area of the Mehrgarh aceramic neolithic. It appears at the moment that Baluchistan stands as an independent zone of the birth and growth of the cultural process which changed the pattern of human life from the Mesolithic to the Neolithic. How early does it go in terms of calender years, we do not know, but our guess is that it cannot be later than the 6th millennium B.C.

But in the 6th millennium B.C. itself Djeitun Neolithic Culture in south Turkmenia had completely established itself. Could it then not inspire the Mehrgarh Culture? However, it does not appear to be so since on the one hand the distribution of the Djeitun itself is confined to southern Turkestan, and on the other, it is marked by a much higher stage of culture than we meet at Mehrgarh. Besides many objects of bone, stone and clay, such as needles, balls, cones, discs, animal and human figurines, it is marked by a beautiful handmade pottery, mainly round and carinated bowls decorated with groups of wavy and straight lines in ochrous red colour. It is, as we know, completely absent at Mehrgarh.

One may refer to one more issue in this context. Archaeological discoveries during the last three decades have clearly shown that in the Orient there have been two variants of Early Neolithism, one depending predominantly on pastoralism and the other depending predominantly on agriculture. The Djeitun Culture falls in the latter category while Mehrgarh seems to fall in the former. One may be tempted to argue that these are not two variants but two stages of the neolithic : pastoral nomadism followed by agricultural sedantarism. But the available evidence does not seem to support this proposition : their areas of distribution differ from each other; for example, Central Asian neolithic communities practising pastoralism inhabited the northern and eastern regions while those practising agriculture occupied the southern region.

The Ceramic Neolithic, without copper-bronze implements, is, however, not a well-marked stage in Baluchistan. But that need not surprise us, since in many areas of West Asia the same thing happened: for example, at Cayonu, Braidwood discovered copper pins, etc., in the otherwise pure neolithic matrix of the seventh millennium

B.C. In all such cases, it should be noted, as Gordon Childe once wrote, that although such small items may have been fabricated or imported, yet they do not seem to have brought about any effective economic or technological change. In any case, from now onwards, the course of cultural history of Baluchistan got somewhat linked with the course of cultural history of Iran and Central Asia. We must, however, hasten to explain the implications of the term 'linked' since in the past scholars like Childe, Piggott and Gordon created an impression in the minds of their readers that Baluchistan, during this period, as also in later periods, served no more than a place of refuge for the Iranians. Our present day understanding of the cultural dynamics of Baluchistan clearly shows that culture in this part of the world developed on its own terms, and the evidence of ceramic similarity, sometimes in typology but more often in decorations, between Namazga, Shahr-i Sokhta, and Quetta-Nal complexes cannot be unduly emphasized. While similarity in certain geometrical designs may be only incidental because most of them appear to have been the copies of decorative designs on basketry, the faunal motifs largely depend on the figure of goat and bull, common enough animals in the Indian Borderlands.

Therefore, although Fairservis and others draw our attention to the evidence of pottery as found at Sialk, Hissar, Chashma Ali, Bakun, and other places, yet the detailed study of pottery shows that in some cases at least the goat and bull may have been depicted locally without being inspired by a foreign model. In some cases the mobility of the people may have increased considerably the exchange of ideas and goods, but pottery perhaps was rarely involved as it is both difficult and uneconomical to carry pots over long distances. It is hardly necessary to emphasize that economic and intellectual interaction is not the same thing as colonization or infiltration of a region by the people of another region.

## Southern Afghanistan

### MUNDI-GAK

*Mundigak I, Early Chalcolithic complex* : In southern Afghanistan we have as yet not been able to locate any site of the aceramic neolithic group and, therefore, we are unable to state if this part of our region was also inhabited during the sixth or fifth millennium B.C. The best known site excavated so far in this area is Mundigak, located north of the modern city of Kandahar. Besides Mundigak, the sites excavated in this region are Deh Morasi Ghundai and Said Qala Tepe but Mundigak still remains to be the most imposing one.

The sequence of protohistoric cultures at the site passes through seven stages or periods of which first or lowest is marked by rectangular mud and mud-brick houses. The main rooms contained hearths in the centre, while side rooms of some of the houses have yielded the evidence of ovens or kilns for making pottey. The pottery was handmade and also painted. On the basis of the decorative designs and a few shapes, the excavator shows the affinity of this ware with that found in Period II of Kile Gul Mohammad in Quetta as also at Hissar in northern Iran. It, therefore, appears that we are dealing here with an early third millennium or late fourth millennium, B.C. culture. Casal, the excavator, feels, and Fairservis endorses his views, that the culture-complex of Period I may have come to the site as a ready-made item from somewhere else. The parent region has yet not been defined. We would, however, like to suggest that the impetus would have come from the Quetta Valley where an earlier phase of the neolithic has been located at Mehrgarh and Kile Gul Mohammad. Even the early stage of Chalcolithic in Afghanistan and Baluchistan appear to have been evolved in this part of South Asia itself.

## Central India : Ganga Basin

### KOLDIHWA—MEHGARHA CULTURE

In recent years, yet another centre of very early neolithic culture has come to light. It is located in the Ganga basin in a region a little north and also south of the confluence of the Ganga with Yamuna in Uttar Pradesh, northern India. The actual sites are located on a tributary of the Ganga, the Belan, coming down from the Vindhyan hills of Central India, as also on an old course of the Ganga.

As has been noted in Volume I, the Vindhyas were rather densely inhabitated during the Palaeolithic and Mesolithic times and it was during the Mesolithic times that the Vindhyan people occupied the Ganga plains. There are nearly two hundered Mesolithic sites in the Allahabad and Pratapgarh districts, mostly on R. Sai, of which Sarai Nahar Rai, in District Partapgarh, has been excavated for a number of years. Here people lived, probably around 9000-6000 B.C. on the banks of a river or a big lake since their sites are found on the ox-bow lakes. They buried their dead in regular cemeteries. Mehgarha has also been recently excavated by G.R. Sharma (1978). The evidence shows that the people lived along the lakes and some sort of seasonal migration was practised by them around since 9000-6000 B.C. Mesolithic habitations of this category have also found in the Belan Valley at Chopani-Mando.

It appears that around 6000-5000 B.C. at Mehgarha a group took to domestication of cattle and also agriculture (rice). The transition from Mesolithic to Neolithic was thus slow but sure, people lived in huts and made lithic tools—polished axes as well as blades. At a later stage even pottery was developed; to begin with, a thin handmade grey ware with incised decorations. This is evidenced at Koldihwa or Koldihwa-Deoghat, a neolithic site on the Belan excavated in 1975. Here the Ceramic Neolithic phase is to be dated in the sixth-fifth millennium B.C. since the succeeding chalcolithic culture is dated by Radiocarbon method to the middle of the 5th millennium B.C. (4687 and 4317 B.C.) (Gupta 1972; Misra 1977).

### PHASE B

It includes neolithic developments of 6th and 5th millennia B.C. In this phase Dales includes Djeitun, and hesitatingly Gumla, Sarai Khola and Jalilpur.

We strike a note of disagreement with him. As we have already shown, Phase B is definitely preceded by the Aceramic stage as discovered at Ak Kupruk, Mehrgarh, Rana Ghundai, Kile Gul Mohammad and Gumla. They may belong to different dates, nevertheless they do form a definite cultural stage and may go back to seventh, even eighth millennium B.C., at least at a couple of sites—Ak Kupruk and Mehrgarh. The equations in Phase B are equally doubtful : Gumla, Jalilpur and Sarai Khola may not belong to the same chronological or cultural horizon as Djeitun. Since much of it has been covered while dealing with Phase A, we will now deal with Phase C of Dales.

## PHASE C

It includes "the Early Chalcolithic Period of the first half of the 4th millennium B.C. Small village settlements became more numerous. Copper objects made their first appearance, so also the potter's wheel (except for Turkmenia where handmade pottery continued till 2500 B.C.). We see the earliest convincing evidence of cultural interaction between Turkmenia, southern Afghanistan and northern Baluchistan (Dales 1976)." The last observation is doubtful since nothing definite can be said about the economic and cultural interaction as such between Turkmenia and Baluchistan before 3500 B.C., *i.e.*, long before Namazga III. Siestan was a barren land, Sokhta emerged as late as 3200 B.C. and Namazga represents only the Formative Stage of Turkmenia's own cultural *form*. Southern Iran—Yahya and Iblis—was out of this process. The chances are that northern Iran may have had some contacts with Baluchitan through sites like Rana Ghundais. Gumla II and III may belong to Namazga III times, so also Mundigak III, but not to Namazga I. Nothing specific of Namazga I is found in Baluchistan and southern Afghanistan. We do not agree with Dales that the pottery of Period I (incidently, which sub-phase?) of Mundigak exhibits 'painted motifs' which are 'closely' related to Turkmenian ceramics.

It may be recalled that Namazga I complex, as represented at the Kopet Dag submontane sites of Anau, Namazga, Kara and Yassi, and the Geoksyur Oasis sites of Dashlidji Tepe, etc., is characterized by not only a characteristic painted pottery but also by a special room, called 'shrine room', located in one of the houses of the submontane settlements, like Anau and Yassi, and Geoksyur Oasis sites like Dashlidji Tepe. Each one has frescoed walls with polychrome geometric patterns. Similarly, clay bull and clay female figurines with faceless rounded bodies having exaggerated sexual attributes go to characterize it. Mundigak I is devoid of such features. Mehrgarh chalcolithic (Period I of 1974 Report) is characterized by wheelmade painted pottery, the female figurines may or may not correlate with it.

## PHASE D

It encompasses the second half of the 4th millennium B.C. and "demonstrates a widespread distribution of similar artistic and cultic elements. The popularity of polychrome and bichrome decorations on pottery is common to the entire Turkmenia-Indus region, now with the most common single motif being the stepped triangle or pyramid. During this phase we see the introduction and spread of stamp seals and obese female figurines. In Turkmenia this phase is designated as Namazga II distinguished by 'its gaily coloured polychrome painted surfaces' and female figurines (from Kara-Depe) in a seated position with legs extended forward and bent slightly at the knees...... There are unmistakable parallels between these Central Asian figurines and those found in the recent excavations at Gumla and Jalilpur in the northern Indus Valley and at Mehrgarh in the Kachhi Plain. These elements are common at Shahr-i Sokhta Period I in Sistan, in Period III at Mundigak and throughout northern Baluchistan and to the northern Indus plain." (Dales 1976, 71)

The above details do not completely fit into the known chronologies. Namazga II is generally dated between 3800-3300 B.C. while Sokhta I is securely dated to 3200 B.C. onwards, on the basis of a Proto-Elamite tablet and a number of seal-impressions found in the lowest levels. Sokhta I is, therefore, to be correlated with Namazga III, Mundigak III and Gumla II-III, and not Namazga II. It will imply, therefore, that Namazga II elements (*e.g.*, stepped pyramid motif) reached the Gomal Valley and the Helmand Valley long after the adoption of these elements in Turkmenia. At Jalilpur also, where they are found in the Sothi complex, their occurrence may have coincided with Namazga III, *i.e.*, the first part of the third millennium B.C. rather than with Namazga II. Mughal (1974, 112) also maintains this position. Tosi also subscribes to it (1973-74, 52). But admittedly, our chronologies are not so secured as to be exact on this issue. By all counts, the fall of the fourth millennium B.C. witnessed the introduction of a few Namazgian II-III (III being only the highly developed stage of II) elements in not only the Indian borderlands but also within the Indus plains.

The first half of the next millennium (third), therefore, emerged as the highest water-mark in the developmental graph of the chalcolithic cultures and their interaction in this part of South Asia.

## PHASE E

It encompasses the first half of the 3rd millennium B C. In Turkmenia it is represented "by Namazga Period III, IV and possibly V" (Dales 1976, 72). Nothing could be more unacceptable to us than this in spite of the fact that Dales argued in various ways to lower the generally accepted dates of Namazga IV and V; for III there is no disagreement. Those who have actually handled the material from Turkmenia and have the first hand knowledge of these sites, will bear us out that there was a world of difference between Namazga III and IV (upper half), Namazga III was the natural outcome of a cultural *form* that originated in Namazga I times but Namazga IV (upper levels) heralds a definite departure from the past. Not only cultural elements change, even sites like Kara-Depe, in the submontane region, and the Tedjen Oasis sites, were completely deserted at the end of Namazga III times. In fact, Namazga V also marks a definite departure from Namazga IV (lower levels). When pottery forms and decorations over them are placed in a sequence from Namazga III to Namazga IV (upper levels) it beeomes quite apparent (see pottery sequence chart in Chapter 2). Similarly, when pots of Namazga IV (they are painted) are placed by the side of the pots of Namazga V (all are unpainted) the difference becomes quite apparent (see the above mentioned chart). These departures undoubtedly vouch for a much longer period for these three cultures put together than mere 500 years (first half of the third millennium B.C.) allotted by Dales. If we agree with him and place the end of Namazga V in 2500-2400 B.C. then the problem of dating Namazga VI and Yaz-I will strike us on the wrong shoulder : Namazga VI will become contemporary of the Mature Harappan Culture (2400-1800 B.C.) or else both Namazga VI and Yaz I together will become contemporary. Since Yaz-1 is an Early Iron Age culture it cannot be placed before 1200 B.C. on the present showing. In fact, Iron Age in Turkmenia, as elsewhere in Soviet Central Asia, for example at Dalvergin Tepe belonging to the Chust Culture of the Fergana Valley, does not appear to be older than 1200 B.C. Arguing backwards, if Iron Age begins around 1200 B.C. the Late Bronze Age of Namazga VI, represented by a devolved stage of culture, can hardly be pushed back to 2400 B.C. It will allow too long a period to it. It will also disturb the evidence of the Harappan seal and other antiquities found in the Namazga V levels of Altin-Depe and elsewhere in south Turkmenia to which our attention has been drawn both by Shchetenko and Masson.

Shahr-i Sokhta also disputes Dales stand : the site continued till 1800 B.C. and without any break, as the so-called 'spiral chornology' of Tosi shows. Around 2400 B.C. 'Eastern Quarters' were largely deserted in favour of western quarters but it need not be interpreted in terms of adverse situation since now the area covered by the people (80 hectres) was much more than the area covered by the Sokhtians earlier (18 hectres). Mundigak continued to exist during the Mature Harappan phase. So was the case with Mehrgarh. We are afraid, the situation was not exactly the same as Dales visualizes in spite of the fact that a number of sites appear to have been deserted in Baluchistan and the plains of the Indus Valley by 2500 B.C. (Gupta 1978 ; Dales 1976). But then, a number of Namazga III sites were also deserted in south Turkmenia. To us, some were temporarily deserted due to natural calamities like fire and floods (*e.g.*, Gumla and Kot Diji) while others were deserted to swell the populations of the emerging cities like Altin-Depe and Namazga-Depe in Turkmenia and Mohenjodaro in Indus Valley. Urbanism becomes the cause of the desertion of many villages, albeit indirectly, due to the newly emerging socio-economic pattern which requires the services of many a skilled and non-skilled hands in return of secruity of food and comforts of city life. We, therefore, do not subscribe to the following analysis of

Dales (1976, 72-73). "The dating and relative chronology of the later part of Phase E (Namazga IV-V ? ) is difficult and subject to diffierent interpretations. The Soviet archaeologists have untill very recently dated this "proto-urban" period to the first half of the 2nd millennium (Sarianidi 1971, 291-310) but other scholars have seen the developments as fiitting closer the technological and cultural patterns of the middle of the 3rd millennium with the latest date for the Namazga V being equivalent to the Old Akkadian (Sargonid) period of Mesopotamia... The appearance of monumental architecture and possibly a fortification wall at Altyn Tepe in Turkmenia (this has already been shown by the excavators as false assumption) fits neatly with the presence of impressive architecture at Shahri-i Sokhta (there is no fortification wall at Sokhta, only a large house), a "palace" and "temple" at Mundigak (they belong to Period IV in which Mature Harappan elements of post-2500 B.C. are found) an Early Harappan defence wall at Kot Diji in the Indus Valley, and perhaps with the monumental architecture reportedly discovered at Mehrgarh" (Comments in brackets our). We feel that the period of 'monumental structures' in the Indian borderlands was contemporary with the Mature Harappan period covering the second half of the third millennium B.C., it does not coincide with the Early Harappan period of the first half of the third millennium. There is no great point in bringing in the revised chronology (Dales 1976, 73) of Hissar III B and III C, 2800-2400 and 2400-2000 B.C. respectively, in the context of Altin-Depe because there is no firm tie between Namazga V antiquities and Hissar III B. The objects (a bull's head in gold (Plate XVI) alabaster columns, disk, a gold animal head (Plate XVII) from the funerary chambers of Altin-Depe, as quoted by Dales, have parallels in Hissar III C level (2400-2000 B.C.), as Dales has himself observed (Dales 1976, 74). On all counts Namazga V is contemporary with Mature Harappan-Hissar III C bracket with Mesopotamian knot.

But we are in full agreement with Dales, who followed Mughal (1968) in this respect, that Namazga III coincides (incidently, Mughal had followed A. Ghosh, 1964 on the question of Sothi complex) with the Early Harappan, since both belong to first half of the 3rd millennium B.C. In fact, it is likely that the lower half of Namazga IV, which has yielded typical Namazga III painted pottery, also falls in this bracket. We are also in agreement, although only partially, with Dales (1976), who followed Shaffer (1974), when he maintains that "the relationship between the Indus Valley and Central Asia during Phase E can be characterized as wide ranging exchanges involving a limited number of basic raw materials distributed by non-professional means. There is no reason to believe in the existence of full-time professional traders and merchants in a modern western sense during this proto-urban phase. It is most likely that these relatively small quantities of raw materials, and perhaps finished jewelry, were carried by normal migratory or transhumance wanderings." Our agreement with this view is partial because the quantity of lapis lazuli both at Shahr-i Sokhta and

Jalilpur is far too much to have come through the nomads in their normal migratory wanderings—some form of organized machinery for trade in such raw materials will have to be imagined. K.C. Malhotra makes it clear. In South Asia, except for Central India, where we have pastoral nomads, as well as industrial nomads, like Dogga Lohars who make tools of iron from ingots purchased in towns—they themselves never do mining and smelting; no where we have now any evidence of a nomadic group who engage themselves in any other activities except those connected with animals. The problem of lapis trade in the Indian context has been very admirably dealt with by Chakrabarty in one of his recent articles (1978) where he also visualizes a situation in which only organized trade could be effective. Similarly, trade-mechanism between India and her neighbours has also been dealt with by him (1977) from an angle not dealt with earlier by either Dales or Tosi or Lamberg-Karlovsky : it takes into account the late 18th and early 19th century (*i.e.*, before the Britishers introduced their organized system) data on carvan trade from the Indus to the Oxus, accounts of many European vistors. He then tries to reconstruct the situation as may have existed in the 3rd millennium B.C. He comes to the conclusion that "at no point of history would it be wise to overemphasize the maritime character of the Sind trade at the expense of its overland ties" (Chakrabati 1977, 30). This, as one may see, is in contradiction with the theory put forward by Dales (1976).

The point of difference between us and Shaffer and Dales in this respect (trade mechanism) lies also in the fact that while in the proto-urban phase we do visualize some form of organized trade, even in Baluchistan, they visualize its absence. To us, the very term 'proto-urban' is indicative of the fact that some form of organized trade, even in inter-regional sphere, did exist at this time.

We also partially differ from Dales on another point—cultic objects. He mentions the existence of a few 'shrines' in the first half of the third millennium B.C. in Turkmenia as also the occurrence of female figurines in graves in the same region. This is correct. But when he talks of similar figurines in human burials of 'Northern Pakistan' (1976, 75) we are at a loss to locate a site of that antiquity in northern Pakistan which may have yielded clay figurines in graves. If he has in his mind Gandhara graves excavated by Dani and the Italians, then it may be clearly stated that the evidence belongs to second millennium B.C. and not third, and, therefore, of no relevance to our present discussion. But we do agree with another aspect of his observation—"the remarkable uniformity of the form and style of the figurines extending from Central Asia to the Indus" since female figurines with joint extended legs, sometimes with slight bend in the centre, are found at a number of sites in this region (Fig. 5.8).

In this final analysis of Phase E, Dales appears to have unconsciously (since he has not openly said so) evolved a socio-economic frame-work for South Asia in a unilinear evolutionary model for one very simple reason—the 'proto-urban' phase in the whole region (Turkmenia, Siestan and

Baluchistan, including Afghan Baluchistan) has been placed before the 'urban' phase as exemplified by the mature Harappan Culture. Incidently, it will mean that the Harappan cities in this part of the world were dealing with only the 'rural' settlements of the post-Protourban phase. Somehow we are unable to accept it.

In fact, with Namazga III, qualitatively we reach the highest watermark of the chalcolithic developmental curve in south Turkmenia, as may be made out both from the first appearance of stamp seals, the mark of ownership and authority, and from the qualitative and quantitative increase in production of a variety of items of art and craft as well as items brought from distant places, such as lapis lazuli from Badakshan. This has been so even though some earlier settlements were now shifted, nearly a quarter of the Namazga I-II cultivated territory was abandoned, and painted designs on pottery became somewhat standardized through geometric patterns (zoomorphic motifs were now much less used) arranged in repetitive panels or in long friezes. We have definite evidence for the demographic rise and the concomitant demand for more food and also what may be called luxury goods, such as beads of semi-precious stones and bronze, gold and silver objects which 'form the currency of important social ritual', as well as cultic items, such as the terracotta figurines, whose number has now increased over the previous period. To Tosi (1973-74, 47), this situation created 'tensions capable of jeoparadizing any orderly urban development.' Also 'perhaps this is why southern Turkmenia came to find itself "backward" with respect to Mesopotamia and southern Iran......'We, however, strike a note of complete disagreement with him for there is ample evidence to show that in this period all kinds of technical advancements over the past took place, for example, vertical draught kilns of greater capacity and higher temperature was introduced. If south Turkmenia could not develop the urbanism of the Mesopotamian kind it was hardly due to any supposed socio-economic tension in the society since in that case we will have to impose the same phenomenon on Siestan and Baluchistan also which will be 'too much of an archaeology.'

Namazga III is best represented at Kara-Depe which covered about 8 hectres of land allotted to about 700 inhabitants. A typical house had a courtyard with a hearth in the centre and a number of rooms, generally four around it, usually furnished with niches and benches. Narrow winding lanes seem to have roughly divided the settlements into a few blocks. The sizes of the houses may show that the individual nuclear families of four to six members became the social unit. This may also be made out from the collective burials of the *tholoi* (truncated-cone shaped structure) type. As has already been pointed out, richly decorated pottery, stamp-seals, metallic objects, terracotta figurines, imported items, like lapis lazuli, etc., have been found here in abundance.

There is yet another aspect of this culture which we know only from the Tedjen Oasis : the system of irrigation through canalization of the land as and when the hydrological changes changed the course of the deltaic channels. It involves not only the growth of a technical device but also the emergence of corporate life based on collectivism. May be, it was a case of 'necessity is the mother of invention', nevertheless when seen in the context of overall prosperity of the people, it becomes more significant than mere a product of necessity. It may be pointed out that once the technique was perfected and the standards laid down (3 to 5 m in width and 1·5 to 2 m in depth), it was used with the same dimensions even in later times, Namazga VI, when the Murgab delta was occupied and similar situation was faced by the people.

The Geoksyur Culture of Namazga III times is one of the most important culture-complexes of South Asia of the early third millennium. In fact, no other contemporary culture had such a wide-spread influence over Siestan, Baluchistan and Afghanistan, and the Indus basin, as this. It has been demonstrated by Tosi (1973-74, 52) that 'more than 40% of painted pottery from Sokhta I can be associated in shape and decoration with Geoksyurian models while 60% could relate it to the earliest layers of Mundigak I-II, Kile Gul Mohammad IV and Damb Sadaat II in Quetta Valley.' The anthropomorphic clay figurines coming from these layers correspond typologically to the south Turkmenian tradition. Characteristic is the type with the head shaped like a bird's beak and legs together in a single conical body bending forward, thus known as a '*foot profile*' (Fig. 5.8). On the basis of this evidence Tosi visualizes the first colonization of Siestan by the Geoksyurian people coming possibly through Mundigak. He attributes the supposed phenomenon of migration to the drying up of the different channels of the Tedjen which may have forced 'at least a very small part of the population' to the Helmand Valley. However, the occurrence of only four pot-sherds of the Namazga IV type in Sokhta II levels, clearly shows that the ties with south Turkmenia were somewhat loosened, although not totally snapped because of the following (Tosi 1973-74, 53) (as he himself admits, these elements are also common to Tepe Hissar III A-B and Sialk IV).

'(1) an almost absolute predominance in the graves of contracted inhumations with no attention paid to any particular orientation ;

(2) grave types, *tholos*; rectangular cist, or circular pit with dividing wall in the middle ;

(3) drilling and processing techniques of semi-precious stones;

(4) round metal mirrors with no handle;

(5) gilded *faience* or clay necklace beads;

(6) types of anthropomorphic figurines;

(7) frequent use in dwellings and graves of bronze wands with heads cast into various naturalistic motifs.'

Whatever credence we may give to these so-called common features between south Turkmenia and Siestan, one thing is archaeologically clear : some kind of diffusionary model will have to be invoked in case we want to explain the situation of cultural commonality not only between the Tedjen and Helmand but also between the Tedjen and the Gomal and, between the Tedjen and the Ravi. A coherent picture of this has been presented by Mughal (1968) in his so far unpublished Ph.D. dissertation where he calls it 'Greater Indus' phenomenon equated with the Early Harappan stage of the first half of the third millennium B.C. But admittedly, even this attempt was limited by the paucity of material then available. Even today, there are many gaps in our knowledge.

Diffusion! But what kind of diffusion? For Sokhta Tosi visualizes direct displacement of some people from Geoksyur region who colonized Sokhta, but who, in fact, came from Mundigak —it means these people moved first Mundigak and then to Sokhta. Unfortunately, at Mundigak I-II the percentage and number of common elements is somewhat small when compared with Sokhta; may be, at Mundigak they halted for a short while only.

But all this is rather too dramatic and needs more careful examination of the actual situation; it is just possible that they moved separately to Sokhta.

Let us now take the case of Damb Sadaat II-Periano Ghundai (*i.e.*, Quetta-Zhob region) complex in which stepped cross and stepped rectangle motif on pottery are found along with a clay stamp seal, terracotta female figurines with joint legs and, sometimes with beaked heads, alabaster vessels, bronze dagger without mid-rib, bull figurines, etc., they have their counterparts in Namazga III complex of south Turkmenia. How to account for it? Diffusion of idea or migration of people?

And what about Gumla II and III? Here also we have stepped triangle and stepped cross motifs on pottery, of course, on a very small number of pots. Other pots are richly painted with geometric designs, as in Namazga III, but their patterns are entirely different. But *foot-profile* terracotta figurines also occur (Fig. 5.8).

How to account for it? Direct diffusion, or indirect diffusion through chain process, its immediate source not being Turkmenia but Baluchistan?

Further, how to account for the occurrence of terracotta figurines with *foot profile* at Jalilpur near Harappa (Fig. 5.8) in the Indus plains?

From IV A levels (=Ur III= Mature Harappan) at Tepe Yahya comes a chlorite plaque with architectural facade of stepped triangle or pyramid (there is absolutely nothing else of Namazgian III complex). How to account for it?

From the graves of Shahdad, near Kerman, towards the north, also a Namazga III type seal was found. This has also to be accounted for.

At Bampur, at least one example of painted potsherd is there which shows the stepped motif. How to account for this also?

There are two kinds of models quoted by Lamberg-Karlovsky (1973), originally proposed by Clarke (1968):

*Invasion Model* : In this model an alien people is taken to have moved in physically in an area which is already occupied by another group. Allchin's and Gordon's analyses of the Baluchi cultures adopt this model. According to them, people from Iran actually moved into this region in wave after wave.

*Diffusion Model* : It has two subtypes :

(a) Stimulus/bow wave, and (b) Culture-creep models.

Stimulus/Bow Model : 'the like responses to like needs precipitated by outside stimulus not itself copied or adapted' (Clarke 1968, 422).

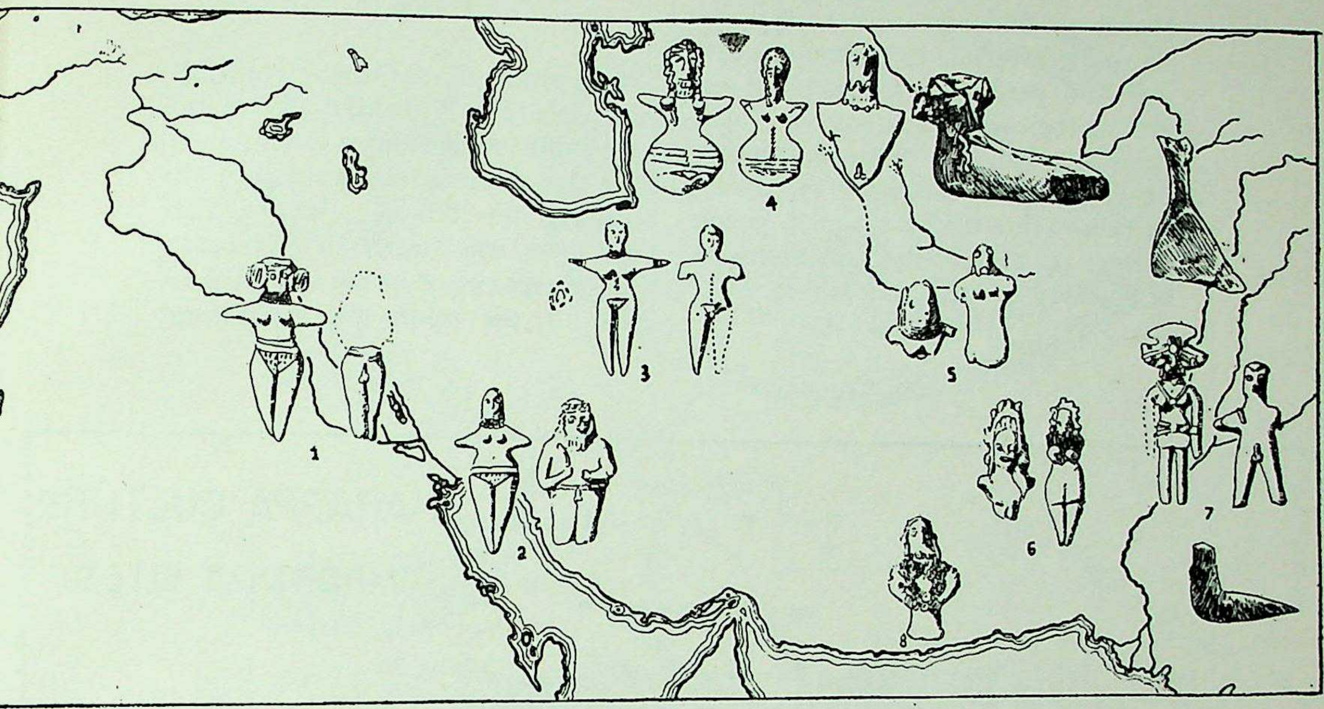


**Fig. 5.8. Map showing typical terracotta-figurines of different regions (3rd millennium B.C.)**
*After Sarianidi*

**1. Mesopotamia; 2. Susiana; 3. North-eastern Iran; 4. Southern Turkmenia; 5. Southern Afghanistan; 6. Northern Baluchistan; 7. Indus, pre-Indus; 8. Southern Baluchistan**

Wheeler's analysis of the origin of the Harappa Culture adopts this model when it states that the *idea* of urbanism came from Mesopotamia. Culture-creep model is defined as 'the chance resemblance of influences and elements drawn from neighbouring areas which have independently diffused to a distant area where they reform an apparent unit complex from a common tradition.' (Clarke 1968, 421). The occurrence of stepped motif at Yahya and Bampur may be quoted in this context, since this motif may have come independentally in south Iran from Siestan.

In fact, Invasion Model may not suit the situation of Mundigak III, Damb Sadaat II, Gumla II-III and Jalilpur II, although it might suit Sokhta I. For them even 'Stimulus Model' does not suit since the adoption of certain decorative motifs and iconographic elements does not fall in the category of 'like responses to like needs.' We, therefore, prefer the 'Culture-creep' model which, in effect, means 'secondary diffusion' or 'chain diffusion'. We feel that one wave of some people did come from Geoksyur Oasis to the Helmand Valley and introduced certain popular elements of their culture at one or two places. After this initial 'invasion', so to say, these elements got completely naturalized in the Quetta Valley and in the Helmand Valley. After that wherever it diffused to, for example Shahdad, it went as

Quetta or Helmand element. We have no way to ascertain this through the rather still perfecting methods of our archaeological researches in vogue these days but, we presume, it has to be so since it is absolutely impossible to believe that the Turkmenian people themselves reached the Kerman region at Shahdad or the Ravi basin at Jalilpur.

## PHASE F

This encompasses the mature Harappan phase (Fig. 5.9) of the second half of the third millennium B.C. But, as we have already stated at the outset of this critique, we do not believe that now there was "*a shift* in the interaction spheres *away from the northern land-routes* to the south and the coastal

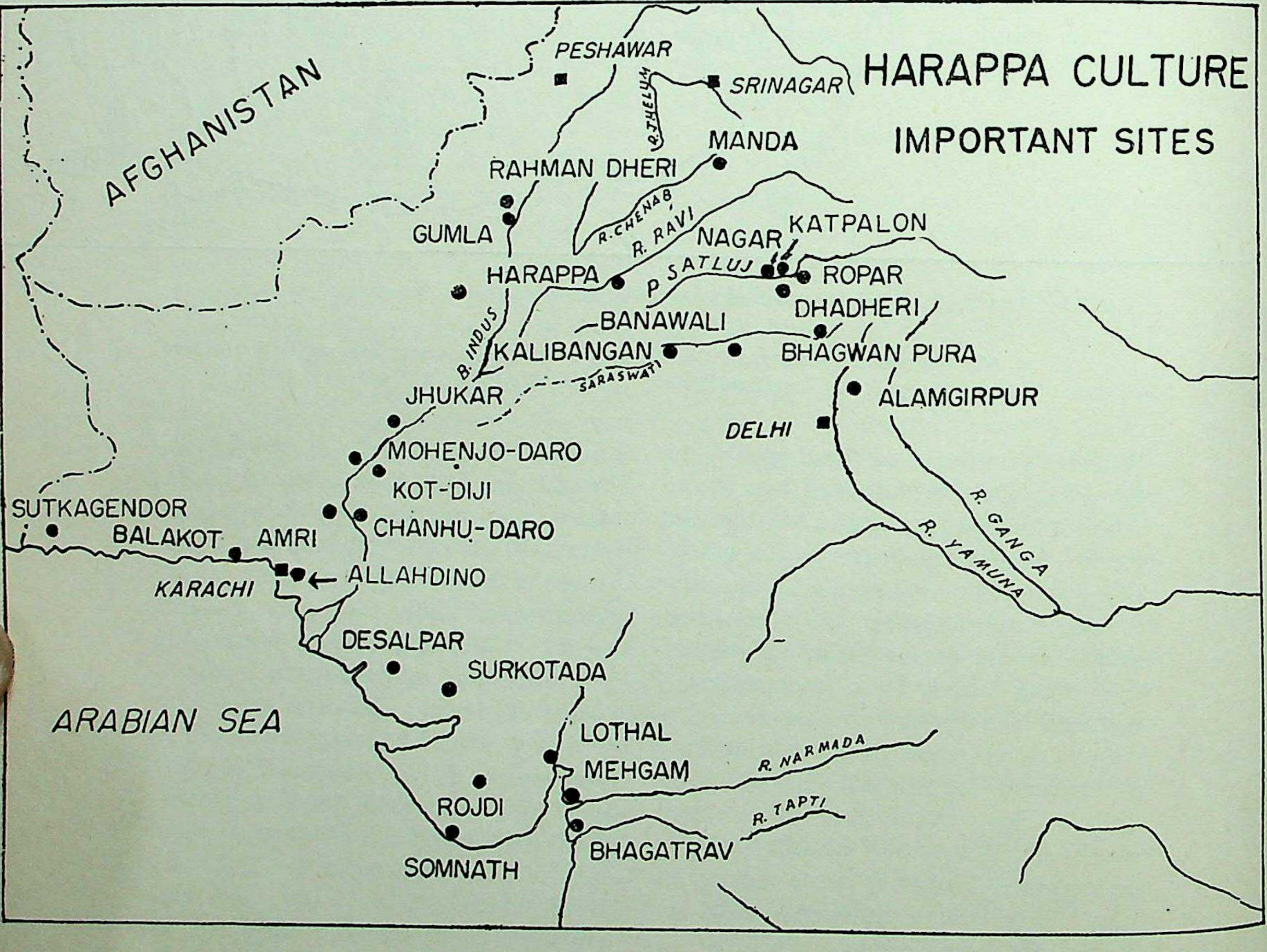

HARAPPA CULTURE
IMPORTANT SITES
AFGHANISTAN
PESHAWAR
SRINAGAR
R. JHELUM
MANDA
RAHMAN DHERI
GUMLA
R. CHENAB
R. RAVI
NAGAR
KATPALON
HARAPPA
R. SATLUJ
ROPAR
DHADHERI
BANAWALI
R. INDUS
KALIBANGAN
BHAGWAN PURA
SARASWATI
JHUKAR
ALAMGIRPUR
DELHI
MOHENJO-DARO
KOT-DIJI
SUTKAGENDOR
CHANHU-DARO
BALAKOT
AMRI
ALLAHDINO
KARACHI
R. GANGA
R. YAMUNA
DESALPAR
SURKOTADA
ARABIAN SEA
LOTHAL
MEHGAM
R. NARMADA
ROJDI
R. TAPTI
BHAGATRAV
SOMNATH

**Fig. 5.9. Map showing important Harappan (including Late Harappan) sites in Indian subcontinent**

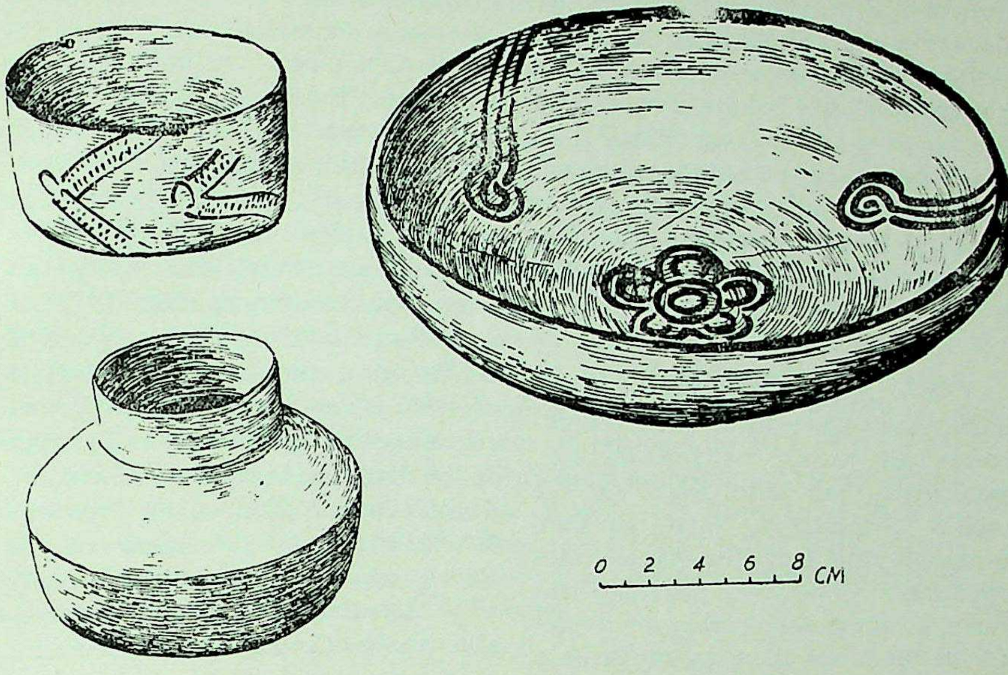


**Fig. 5.10. Painted Grey Ware pots from Hastinapur and Ropar. Mark the difference between these pots, in form and painted designs both, and the pots belonging to the various grey ware groups in Central Asia, West Asia, and countries bordering India**

regions of western India and Pakistan." (Italics ours) To recapitulate our arguments, we may mention that the discovery of asmanyas seven Harappan stations at Shoturgai on the Oxus (Lyonnet 1977) and an inscribed Harappan seal at Altin-Depe (Masson 1977) completely militate against the theory put forward by Dales. Incidently, the excellent large-scale excavations conducted by Dales at Balakot (1977) has been rather disappointing regarding its supposed use as a sea-port for Indus-Mesopotamian trade. Except for an earthen jar, which may belong to Kulli-Behrain type, there is not a single artifact which may be taken as 'imported item from Mesopotamia or item specially meant for export to Mesopotamia'. Dales has very honestly mentioned it in his preliminary report of 1977. We wish, Sutkagendor is excavated on a much larger scale than has been possible hitherto since it may really yield much desired and expected results on the problem of sea-borne trade of the Harappans. Further, the supposed role of the Kulli-folk as the middlemen between the Indus merchants and the Persian Gulf merchants (Dales 1976, 76-77) is also taken by us with a pinch of salt, although we do concede that it was a major complex of the third millennium whose products travelled far and wide. Since the problem does not fall into the framework of our present study we will not elaborate on it and leave it for some other occasion.

Happily, Dales in his 'Addendum' to this article (1976) has taken note of 'Kulli type copper-bronze mirrors with female anthropoid handles' found at Sapalli Tepe, Uzbekistan, as also the discovery of Shorturgai Harappan stations. The occurrence of Nal pottery at Shahr-i Sokhta (Period I) on the one hand and Balakot (Period I) on the other is also extremely significant from our point of view, which admits a marked culture-contact situation existing in the early third millennium B.C. and later.

## PHASE G

The scope of the present work includes one more phase which encompasses the second millennium B.C., particularly the latter half. On the Indian borderlands, now the Late Bronze Age and Early Iron Age cultures developed. Contrary to generally held views, all these were neither the nomadic cultures nor there is any definite proof that their upholders spoke the Indo-European languages. Archaeological evidence does not warrant any such conclusion (Appendix 2). In fact, archaeologically speaking, the cultures which emerged during this period in the Oxus basin appear to be the cross-breeds between the Andronovo Steppe cultures of Kazakhstan-Fergana regions and the Namazga VI—Yaz I cultures—of the Murgab Delta. Their trait infiltration in the Swat Valley is possible in the field of burial practices and a few pot-forms, but nothing more. In the Swat Valley we have so far no evidence of any fortified citadels and the concomitant *milieu*. In the Indo-Gangetic divide it is much more clear since the Painted Grey Ware people neither made any fortifications nor used their pottery (Fig. 5.10), and grave types. Any argument based on the difficult terrain between the Oxus and the Swat won't help since the Oxus cultures clearly demonstrate the establishment of a highly regimented society at places like Sapalli Tepe in northern Bactria and Dashli Tepe in southern Bactria (north-western Afghanistan) which does not admit the constraints of landscape. Cultures of this kind have been seen throughout history to impose themselves in all their basic traits even in inhospitable terrains (Dani 1978).

In fact, the Oxus cultures, as well as the Dahistan cultures in the south-east of the Caspian Sea (Plate XVIII), are directly related to the birth and growth of the Bactrian, Margianian, Parthian, Sogdianian and other military powers during the first millennium B.C. It clearly *emphasises the fact that basically all the Late Bronze Age cultures of this region remained Central Asian in character.*

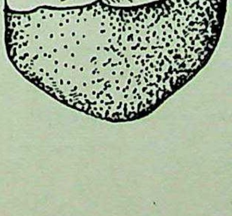
As should be clear from the above discussion, that although by and large, we stand for autochthonous development of cultures in Central Asia and the Indian Borderlands from the Neolithic to the Early Iron Age, at every stage we clearly mark culture-contact situations which are often erroneously judged as diffusion. Diffusion is conceptually a different historical situation, involving as it does the actual movement of men and material in a big way.

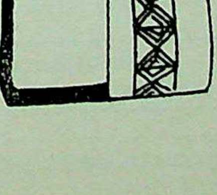
Lest we are misunderstood, we must also make it absolutely clear that we are not anti-diffusionists as such, since we firmly believe that the phenomenon of cultural diffusion and area-colonization have been as much the fact of history as the autochthonous development of cultures. What we, therefore, contest is the indiscriminate use of diffusionary models on the basis of just a few similarities in material items existing in two distantly located cultures to explain away a situation for which presently no reasonable explanation may be forthcoming (Mughal 1977). Dilip Chakrabarty (1977) has also argued in favour of this stand. One might argue that the terms like 'culture interaction', 'culture-contact situation', 'economic-interaction' are just new sophisticated synonyms for the same historical situation which has so far been conveyed by the term 'diffusion' (indeed in some quarters it has been said so) but such an argument would only show that one does not understand the subtle differences which are implied in the operative machinery of the cultural systems which each term precisely denotes. Exchanges, borrowals, imitation, etc., which are generally implied in the use of the new terms are grossly different from the actual migratory phenomenon implied by 'diffusion'. We need hardly elaborate it any more.

The major problem of the polemics which we are facing today centres round the old controversy between the diffusionists and non-diffusionists. What are precisely the terms and frameworks which explain the actual historical situation as it existed on the Indian borderlands during the 4th, 3rd and 2nd millennia B.C.? It is basically a theoretical problem; but by evading it we cannot ever hope to reconstruct the past-as-it-was, a task which professionally we have undertaken upon ourselves.

# EPILOGUE

S.6.1. ↑
S.6.2 →





S. 6.1=A pot-sherd from Namazga III showing human figure  
S. 6.2=Pebble Chopper-Chopping tool from Kara Bura  
A painted pot, Chalcolithic (Yalangach) period  
A bone sickle with stone blades, Djeitun Neolithic Culture  
A Mousterian arrowhead

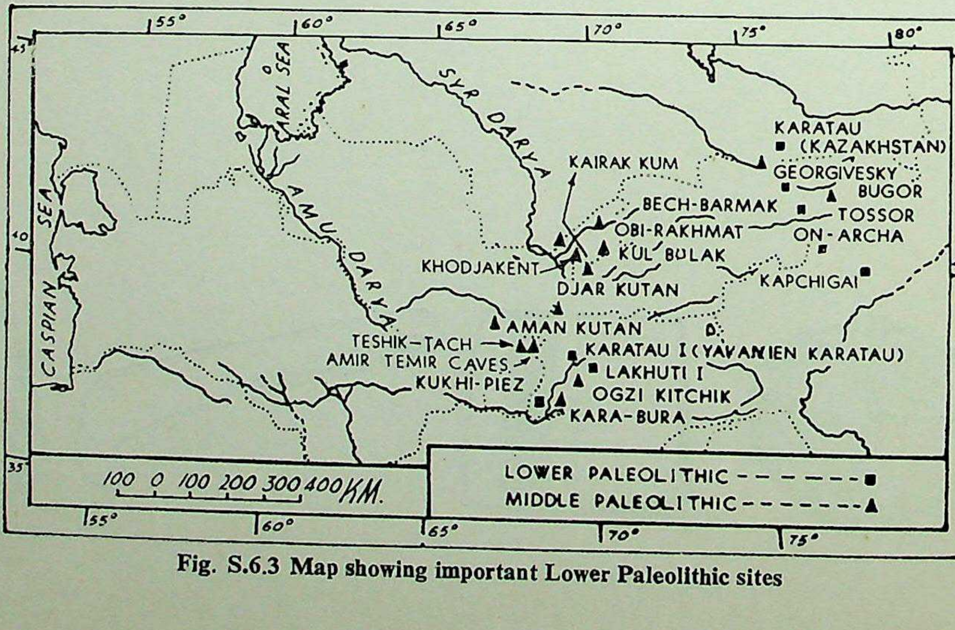
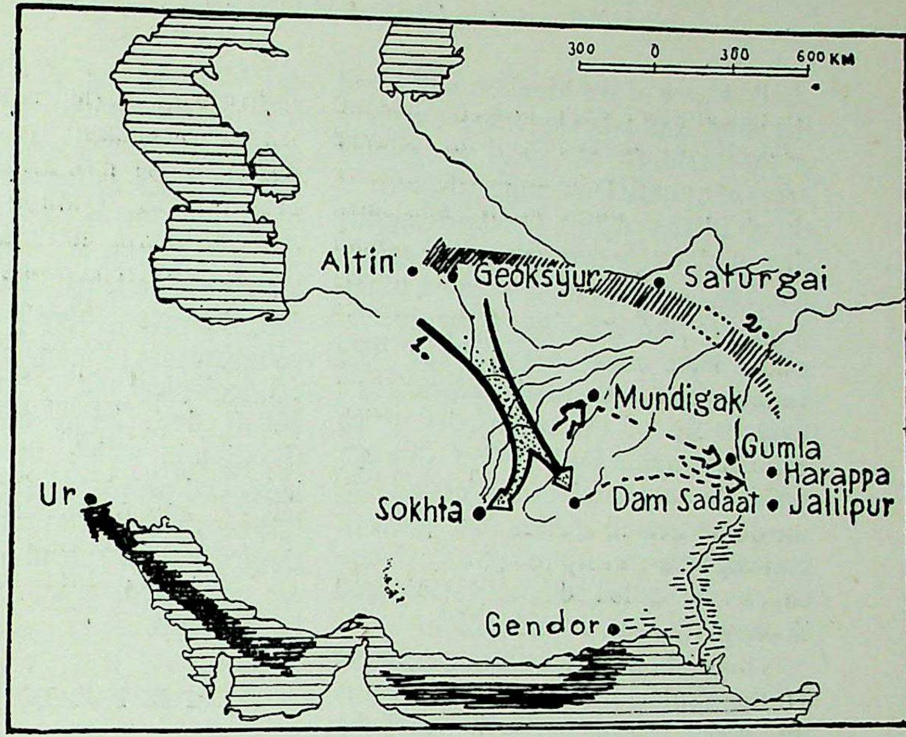

55°
60°
65°
70°
75°
80°
45°
40°
35°
ARAL SEA
SYR DARYA
AMU DARYA
CASPIAN SEA
KARATAU (KAZAKHSTAN)
GEORGIVESKY
BUGOR
KAIRAK KUM
BECH-BARMAK
TOSSOR
OBI-RAKHMAT
ON-ARCHA
KUL BULAK
KHODJAKENT
KAPCHIGAI
DJAR KUTAN
AMAN KUTAN
TESHIK-TACH
AMIR TEMIR CAVES
KARATAU I (YAVANIEN KARATAU)
LAKHUTI I
KUKHI-PIEZ
OGZI KITCHIK
KARA-BURA
100 0 100 200 300 400 KM.
LOWER PALEOLITHIC ■
MIDDLE PALEOLITHIC ▲

**Fig. S.6.3 Map showing important Lower Paleolithic sites**



Map showing the directional changes in the movement of cultures in the 4th and 3rd millennia B.C.

THE cultural dynamics of Central Asia involved in its orbit a large number of countries. Bordering the southern limits of the Soviet Republics of Turkmenia, Uzbekistan and Tadjikistan are located the homeland of some of the oriental civilizations in Iraq, Iran, Afghanistan and the Indian subcontinent. Similarly, bordering the Chinese province of Sinkiang is the Indian State of Jammu and Kashmir, the homeland of a culture as old as the Chinese neolithic. Obviously, each of these cultures played some part or the other in the process of culture-interaction throughout the pre-and protohistoric times.

We are familiar with the concept of Fertile Crescent, the region which starts from the lower Nile in Egypt, passes through the Zagros and ends up in the combined delta of the Tigris and Euphrates. This was supposed to be the cradle of civilization. We are also familiar with the long drawn contreversy between Prof. Braidwood and the late Miss Kenyon over the original home of Neolithism—Jarmo in the submontane region of the Zagros or Jericho, an oasis in Jordan near the Dead Sea. All this is now an old story since the very basis of the old concept, that sedentary life begins with the domestication of cereals and amimals, has been challenged. Neolithism possibly began with the fishing communities along the shallow seas of the Mediterranean and the ponds and lakes in different regions of the world. Or else near the mining areas of essential raw materials, such as the obsidian and flint. On the domestication of plants and animals archaeology has been a poor guide; what we usually get are the remains of the species which have either been of the wild varieties or the domesticated varieties; only rarely of those varieties which belonged to the long period through which the wild species transformed into the domesticated species. No plant or animal, unless morphologically changed, can be called 'domesticated'; bred in captivity is no consideration.

This is, however, only one aspect of the problem. The other aspect is the geographical locale in which the Neolithism of even the Jarmo and Jericho types evolved. The term 'Crescent' has been challenged. And it is here that the discoveries of Soviet Central Asia, Baluchistan and Afghanistan play an extremely significant role.

At Djeitun-Depe in south Turkmenia, aspects of both Jericho and Jarmo are reflected. In fact, according to Masson, it is possible that in the make up of the Djeitun Culture there are the hidden hands of the people coming from that direction, around 6000 B.C., a date which is only slightly later than the date of the earliest level of Jarmo. Jericho was still earlier, perhaps by a millennium. What is significant is not the actual date(s), from region to region it may differ, but the cultural similarity that exists amongst these early cultures. The distribution map of the early cultures clearly shows that the Djeitun sites are located in the submontane regions of the Kopet Dag mountains and, to that extent, the geographical setting of these sites had resemblance with the geographical setting of Jarmo. At the same time Djeitun itself is located in an oasis bordering the Kara-Kum desert and, to that extent, it reminds us of the location of Jericho. This comparison has, however, hardly any intrinsic value because of many other geographical, ecological and hydrological factors, but it does imply the existence of a situation in which the movement of ideas and peoples is facilitated. And this is extremely important as far as the growth and spread of early cultures are concerned, even on the Indian borderlands.

## THE PALAEOLITHIC

But before the sedentary life based on the actual control of the forces of food-items began, life in Central Asia had passed through the different stages of nomadism. The story begins from the Lower Palaeolithic times, 200,000 B.C. although it is not as old as in Africa. There are, however, a few extremely well studied sites of the 'Chopper-Chopping' assemblages, and on this basis certain correlations have been attempted. But all these are tentative since stratigraphically their position is emerging only recently; it is likely that more material from deeper levels of sites like Karatau I and Kudaro in Tadjikistan are recovered soon. Since material items do not have wings to fly, men behind them must also be located by archaeologists, but so far no trace of the bones of the Lower Palaeolithic man could be traced any where in Central Asia and the Indian Borderlands.

Be it as it may, the basic issue is different. It concerns diffusion and cultural geography. The distributional pattern of handaxe-cleaver assemblage is of such a character which creates some doubt if Central Asia ever adopted this tradition: it stops on the western coast of the Caspian Sea, a few handaxes (not the cleavers) that we get in Kazakhastan and Turkmenia are too sporadic to be counted as the remains of a regular culture-complex. Thus, in case the 'handaxe' tradition moved into Central Asia from Africa, passing through Caucasia, as appears to be the case, then it must be admitted, on the present showing, that it was the tail end. As a matter of fact, the number of hand-axes is far more small than the number of chopper-chopping tools, and, to that extent, Central Asia falls into the Chopper-Chopping family, as was also visualized by Movius decades back. And, in case, during the Lower Palaeolithic times, Central Asia was really effectively occupied by the Chopper-Chopping people then the question arises whether they belonged to the Oldowan tradition of eastern Africa or to the Soan tradition of northern India? Our studies show that the Oldowan should be completely discounted since the Oldowan Bed I, to which the unmixed Chopper-Chopping complex belongs, is too early in date to be correlated with any of the known assemblages in Central Asia, since all appear to belong to the upper-most horizon of the Middle Pliestocene-cum-Upper Pleistocene. Not only that, it will also beg another question: where are other sites on the visualized route which connected Africa with Central Asia? In all probability, therefore, the first occupants of Central Asia were the Soanians. But, unfortunately, the Soan type chopper-chopping tools have so far not been found in separate assemblages in north-western Pakistan Swat and Afghanistan, which immediately border Kashmir, and the Potwar region of the Indian subcontinent. It creates some doubts regarding the Indo-Central Asian contacts in the Lower Palaeolithic times, but it must be conceded that the present situation may be the outcome of inadequate explorations on the Indian borderlands.

But the same is not the situation with regard to the Middle Palaeolithic. In fact, interest in the Stone Age Archaeology of Central Asia started from the discovery of a Middle Palaeolithic cave-site in Uzbekistan, the Teshik-Tash, by Prof. Okladnikov, in 1939. It was an epoch-making discovery since for the first time the skeletal remains of a Neanderthal man was found outside Europe. Excavations also revealed the existence of Mousterian tools associated with him. Later explorations by Prof. Coon in the caves of northern Iran supported the theories then put forward by scholars, that the Central Asian Neanderthals came from the Eastern Mediterranean region, somewhere in Mt. Carmel. Both on grounds of morphological features of the Teshik-Tash boy and on the typology of the tools, the Middle Palaeolithic of Central Asia is called 'Asiatic Mousterian'. Somewhat similar (not at all identical) tools, restricted to flake tools, have been found in Afghanistan at sites like Darra-i-Kur. This means, the Central Asian Mousterian did not travel beyond northern Afghanistan. What is also doubtful or somewhat disputed is the extension of this 'culture-interaction' area into

India. Prof. Sankalia through several of his learned articles has tried to prove that the Middle Stone Age tools (sometimes also called Series II tools) belong to the Mousterian complex. The author has, however, his own doubts which have been expressed through various publications, *e.g.*, in Misra and Mate (Eds.) 1965. He would like to make only one more: the Mousterian of Central Asia has a large number of chopper-chopping tools, *e.g.*, at Kara Bura in Tadjikistan, the most talked about site. Now this is the feature almost completely absent in the Indian Middle Palaeolithic. Still, the present author concedes the point that if these tools do not belong to thc Middle Palaeolithic or Mousterian tradition then there is no other group in Eurasia with which it may justifiably be associated; it will then be completely indigenous. Ranov (personal communications) accepts the autochthonous theory; no Mousterian inIndia and Pakistan so far. Late Soan. B also can not really be called Mousterian. So is also true of Sanghao flake tools.

The Upper Palaeolithic is as ill-defined in Central Asia as it in India—there are certain glimpses, no doubt, but details are still to be filled in. Backed blades, pen-knives, a few burins and the like are present in different collections, both in Central Asia and India, but beyond certain typological similarities nothing tangible can be worked out as far as the culture-interaction between Central Asia and India is concerned. There are two major difficulties in the way: first, the Upper Palaeolithic in India is still largely 'peninsular' in distribution, which means there is a big space-gap between Central Asian Upper Palaeolithic and Indian Upper Palaeolithic, and, secondly, the stratigraphic and chronological position of the Upper Palaeolithic in Central Asia, Samarkand and Shognou sites, which alone are typical of the Upper Palaeolithic of Central Asia, is more or less as uncertain as it is in India, although in India at certain places in Uttar Pradesh (Belan Basin) and Andhra Pradesh (Renigunta) there are some indications that the Upper Palaeolithic belonged either to the last stage of the Pleistocene or to the period immediately after the Pleistocene (Misra 1977).

## THE MESOLITHIC

The Mesolithic of Soviet Central Asia is a widespread phenomenon. It passed through two stages—the Non-Geometric and Geometric, as was true of the Indian Mesolithic also. This comparison extends to the continuance of this tradltion in the Neolithic; in fact, even in the Chalcolithic. But could this be taken as an evidence in favour of relationship between Central Asia and the Indian subcontinent? To be exact, we have to remain non-committal. The reason is not far to seek. The microlithic assemblages occur from the Oxus basin through north-western Pakistan, but then the gap occurs—neither the lower Himalayas nor the Indus System and Indo-Gangetic Divide has yielded any microlithic assemblage. In any case, one thing is certain : if the Indian Mesolithic owes its existence to the western regions then Central Asia, Afghanistan and western Pakistan must form the immediate source, which is probable but not proven.

Balonging to the Neolithic period, Central Asia has a number of facies; the Djeitun in Turkmenia, the Kelteminar in Khorezm, the Fergana Valley in Uzbekistan and the Gissar in Tadjikistan. Of these, the most developed facies has been the Djeitun with its characteristic painted pottery, terracotta figurines and mud houses clustered in nuclear villages. The other facies have been rather primitive. However, Tadjikistan being nearest to India, she holds the key of Indo-Central Asian relationship. One thing which is very characteristic of the Gissar Neolithic is the continued use of the pebble chopper-chopping tools. This what characterizes the Neolithic assemblage found at Ror in the Kangra region of the sub-Himalayan zone (Plates XIX-XXI). Thus, there is a possibility that in the process of culture-interaction during the Neolithic period, Tadjikistan and Kangra came closer to each other. It may, however, be categorically stated that unless a few more sites of this facies are found in India, the proposed correlation should be taken just 'tentative'.

## THE NEOLITHIC

During the Neolithic period, however, Chinese Central Asia also came to be inhabited. Provisionally, it has also been suggested that it maintained some contacts with the Kashmir and Swat valleys. At Burzahom, in the Kashmir Valley, and at Aligrama, in Swat Valley, pit-dwellings (Plate XXII) characterized the Neolithic complex, Tusa1977 a feature which is also present in the Ordos. Rectangular perforated harvesters of stone and bone from Burzahom and jade beads from Aligrama establish further links with China. However, as far as Sinkiang proper is concerned, which alone covers Central Asia, nothing of the kind has been found there so far. In fact, the entire collection from Lou-Lan is from surface and we have no idea about the settlement and economy of the people. There is some grey ware, both in India and Chinese Central Asia, but it is not proven if these are generically related (Appendix I).

## THE CHALCOLITHIC

Soviet Central Asia is very rich in Chalcolithic sites, particularly in the region of south. Turkmenia There is a complete sequence of cultures from what is called, Namazga I through Namazga VI, like which we do not have anywhere in peninsular India. But Namazga II and III (Plates XXIII-XXVIII) painted designs have been found on pottery from Siestan(Shahar-i Sokhta), Kandahar (Mundigak), Quetta, Damb Sadaat and other places, such as Gumla (Gomal Valley) and Jalilpur (Ravi basin). It appears, therefore, that the 'culture-interaction area' during this period included several regions between southern Turkmenia and the Indus plains, but not beyond that.

## THE BRONZE AGE

The Bronze Age ushers in urbanisation in south Turkmenia and there are some tangible evidence to support the views of Russian authors, like V.M. Masson and Y.A. Shchetenko, that there was a 'culture-contact situation' between India and Soviet Central Asia. Our analysis, however, shows that the Harappan contacts have been limited to commercial exchanges. We contest Masson's view (1977) that the Altin people spoke Proto-Dravidian. The evidence of a single Harappan seal is no evidence in favour of linguistics. However, certain objects of ivory, bronze, terracotta, stone, etc., do show features which characterize the Harappan items. (Plates XXIX-XXXV) To that extent, the economic-interaction area of the later part of the 3rd millnnium B.C. appears to have comprised south Turkmenia, south Afghanistan, and the Indus Valley. In all probability, there were over-land routes connecting south Turkmenia with the Indus Valley. While one of these routes passed through the Bolan Pass and Kandahar, the second route passed through the Khyber Pass, reached sites like Shoturgai on the Oxus, and then moved into the lower reaches of the Murgab and Tedjen. Lyonnet has (1977) brought to light the discovery of Harappan pot-sherds at Shoturgai. a site of seven stations near Ai Khanum, on the Afghanistan side of the Oxus. With this discovery we may now visualize a situation in which even the Khyber Pass was used by the Harappans. However, in northern Afghanistan, so far, this group of sites happens to be the only pocket of the Harappan culture-complex. This discovery is rather strangesince, so far, the intermediary region of the Ai-Khanum —Khyber—Peshawar axis is not on the map of Harappan India. But now it can be attributed only to the absence of intensive exploration of the region. However, the most significant implication of this discovery lies in the meaning that it has provided to the discovery of a Harappan inscribed seal at Altin-Depe in south Turkmenia. Now it has become possible to visualize the nature of trade-mechanism, trade-routes and economic-interaction between India and south Turkmenia.

With this we enter into the Late Bronze Age and the Early Iron Age (Plates XXXVI-XXXVIII). It is being associated with the early Indo-Europeans to whom even the Vedic Aryans may belong. The theories are, however, based on either the linguistic considerations of doubtful chronology or the archaeological assemblages. The archaeological evidence is, however, also extremely shaky as far as the Vedic Aryans are concerned. The author is not a linguist and the present work does not inculde it. He has, however, dealt with the theories of Dani, Lal, Thapar, Zadneprovsky and others at appropriate places.

## Culture-Interaction Area

The observations made above bring us to the question of 'culture-interaction' areas in the eastern regions of the Orient. In 1973 Lamberg-Karlovsky and Tosi proposed a frame-work in which practically all aspects of archaeology were taken into consideration. The author, however, would like to strike a note of disagreement on a few issues which he feels should be noted for future investigations.

In the first-place, there are at a least two regions which are archaeologically extremely ill-explored : the Khorasan Plateau and the Herat Waste; there is no site known so far which may have yielded antiquities of the Namazga or Shahr-i Sokhta type. If the present state of our knowledge about these areas is not going to be radically changed in the near future and archaeological explorations only reaffirm what is already known then it will have to be explained in clear terms why in the process of culture interaction between South Turkmenia and Siestan-Quetta axis (which includes Kandahar) these two areas did not play any part? On the face of it, no culture-interaction is possible if the route followed was overland, and in the present situation it had to be overland, the two regions are land-locked. The situation is much different from what it is in the case of Indo-Mesopotamian interaction since that was possible through the sea-route where southern Iran could easily be by-passed or only casually used for the limited purpose of procuring raw materials, such as chlorite and alabaster (Asthana 1979a).

There is another kind of difficulty also. The region of south Turkmenia, covered by the Chalcolithic and Early Bronze Age cultures, is rather too limited, only about 18000 sq. km. It practically ends up in the Geoksyur Oasis of the Tedjen Delta, as far as its eastern limits are concerned; even the Murgab Delta was not inhabitated (it was settled only during the Late Bronze Age onwards). We have, therefore, a vast area between the Geoksyur Oasis and the Oxus which was not traversed by the Chalcolithic-Early Bronze Age folks. The upper Oxus has also the same story to tell except for Shoturgai, near Ai-Khanum in Afghanistan, where Harappan settlements have been found, and Tepe Fullol in Badakshan, where a hoard of gold and silver objects showing Namazga motifs has been found. But let it be clearly stated that even these discoveries do not show that the south Turkmenian people themselves colonized the region extending as far east as the Hindukush. On the present showing, the Oxus has to yield positive evidence of the actual expansion of Namazga I to V culture-complexes, in terms of colonization. And yet the Oxus seems to have played a very vital role in the culture-interaction process which engulfed south Turkmenia, south Uzbekistan, south Tadjikistan, north Afghanistan, the Indus-Swat-Zhob-Bolan-Helmand plains, plateaus and highlands, right from Namazga II-III times. Tepe Fullol objects have Namazga motifs and Shoturgai pottery has Harappan elements.

Till recently, we concentrated on the Bolan Pass route as far as India's interaction with Quetta, Kandahar and Siestan (and, therefore, south Turkmenia) is concerned; that Khyber Pass may also have played some significant role was not visualised at all. With the recent discovery of the Harappan sites on the Oxus, as said above, an entirely new dimension has been added to our understanding of the culture-interaction routes of the third millennium B.C.

There is yet another problem: What part southern Iran played in the process of culture-interaction of the third millennium B.C.? That there is definite archaeological evidence in favour of Tepe Yahya-Shahar-i Sokhta interaction, has been brought out quite clearly by Lamberg-Karlovsky and Tosi but as yet there is no positive evidence in favour of south Turkmenia's interaction with south Iran and Sokhta's interaction with Harappa (Asthana 1979 and 1979a).

Clearly enough, there are definite pieces of evidence of the movement of cultures and ideas between Central Asia and India through the Indian borderlands but they cannot be fully utilised at the moment for a connected history of the third millennium B.C.

For the second and the first millennia we have an entirely different picture. The Oxus now becomes the centre of intense activities. It is now colonized. We have large cemeteries and fortified citadels belonging to the Late Bronze Age and Early Iron Age, such as Sapalli Tepe, Dashli Tepe, Yaz-Depe and Tulkhar Cemetery. Many of them have yielded grey wares along with red wares. By now we know that there are several groups of grey ware between Asia Minor and the Indo-Gangetic plains and they cover the entire period of protohistory. Even those belonging to the second millennium are at least half-a-dozen, if not more. Each one is, however, characterized by a definite set of pot-forms and decorative designs as also by a number of associated red wares and movable antiquities, and definite kinds of structural remains. It means, each of these groups of grey ware represents a totality, and, therefore, a culture. As a social scientist, an archaeologist looks at this totality as a unit. Obviously, for him neither the greyness of pottery nor a few common pot-forms alone has any worthwhile meaning in terms of social and cultural mobility. On the present showing, each one of them shows a separate entity. This is, of course, besides individual trait-infiltrations, borrowals and influences. Therefore, the hypotheses regarding the Vedic Aryans and the grey wares have only local and regional applicability, which, in itself, is a complete negation of the theory of Aryan migration in India seen through the grey wares.

By the middle of the first millennium B.C., we reach a stage which has yielded various kinds of documentary evidence about various peoples and cultures not only in Central Asia but also within the Indian mainland and the Indian borderlands. Their account will be covered in some future work.

# THE APPENDICES

# APPENDIX I

## CHINESE CENTRAL ASIA (SINKIANG) AND NORTHERN INDIA

RECONNAISSANCE of the prehistoric sites in Sinkiang was started by Sven Hedin in the early years of the present century. It was included in the *Archaeological Researches in Sinkiang* (Stockholm, 1939) by F. Bengman. The work was reviewed by R.A. Smith in *Man* 11 (1911) under the heading 'The Stone Age of Chinese Turkestan'. His efforts were soon followed by Sir Aurel Stein. Stein incorporated it in his *Sirindia* and *Innermost Asia* published in 1921 and 1928, respectively. It was catalogued by Andrews in his *Descriptive Catalogue of Central Asian Antiquities* published from New Delhi in 1935. Paul Pilliot had purchased three jade axes from this region. Soon after 1928, regular explorations of the region was undertaken by Sino-Swedish expeditions. By 1951 a total of twenty-one sites were plotted on the map of Sinkiang. The explored material is housed variously in the history museums at Peking, Stockholm and New Delhi.

### TOOL TYPOLOGY

The collection[1] from Lou-Lan and a few other sites in the Lop-Nar desert consists of.

A. *Flakes*, presumbly, of the neolithic tradition.

The flakes are small in size, normally 3 cm. and 1½ to 2 cm. broad. These are irregular in shape and conform to known standardised types. In the absence of retouching on any part of the tool and the bulb of percussion, the flakes are presumably the results of shattering the nodules against some anvil. The resultant flakes are many a time rough points with sharp sides. The material employed is usually cryptocrystalline minerals, like quartz. They form part of the great non-geometric microlithic complex of northern China, particularly of the Gobi Culture.

B. (*i*) *Blades*: Long and narrow blades are largest in number. On their upper surface are preserved one or two ridges and, on the lower, prominent bulb of percussion. These are of following types (Plate XXXIX) :

(*a*) Plain blades; without any retouch.
(*b*) Retouched blades; retouching along one of the two edges, from the upper surface.
(*c*) Blades retouched along one edge as in (*ii*), but from the lower surface.

The materials used include chert and jasper. These are, usually, 6 to 4 cm long and 1 to 2 cm broad.

(*ii*) *Fluted Cores*: The cores are cylindrical and conical, both; The striking platform shows marks of preparation.

C. *Arrowheads* : Bifacially pressure-flaked arrowheads with lenticular or lozenge shaped cross-section.

(*a*) Leaf-shaped round-butted symmetrical points.
(*b*) Leaf-shaped straight-butted symmetrical points.
(*c*) Leaf-shaped with incipient tang.
(*d*) Leaf-shaped with prominent tang.
(*e*) Laurel leaf.

These are made of jasper or chert, mostly red or olive-green in colour.

D. *Pressure-flaked axe* : An axe, perfectly triangular in shape, thin lenticular in cross-section; small straight butt-end and unpolished cutting edge. It is bifacially pressure-flaked. Made of brownish chert, it is small in size.

E. *Polished axes* : Triangular in shape, rounded at butt-end, rectangular in cross-section, the polished axes have medial cutting-edge, about 8 to 10 cm in length and 3 to 4 cm in breadth, the axes are made of nephrite, jade or green limestone (Plate XL). A few example have a perforation at the centre near the butt. Such examples were probably used as pendants or charms.

F. *Polished adze* : Same as the polished axe but with a distinction : in the present case, along the edge, on one of the two surfaces, there is a distinct chamfering obtained by grinding and polishing. The tool was probably a hoe or an adze.

G. *Polished chisel* : Long parallel-sided chisel with flat rectangular butt and narrow cutting-edge. With one side straight and the other curved, it is of shoe-last variety. The surface is pitted and polished, indicating intense wind-action.

H. *Perforated disc* : Thick discs, each with a perforation in the centre, probably used as spindle-whorls.

I. *Perforated and hollow end-bead* : It is extremely typical of this assemblage.

## POTTERY

Along with the lithic tools, some

pottery was also found at Lou-Lan although its alleged association with the tools cannot be guaranteed. It is mainly of two types.

(*i*) Grey ware with incised decoration, and

(*ii*) Black ware with crackled surface.

## TOOLS FROM OTHER SITES IN THE TARIM BASIN

(Collections in the Museum for Eastern Antiquities Stockholm, Institute of Archaeology, Peking, West Chinese Union University Museum, Chengtu)

A. *Pebble Tools* : On river-borne flat pebbles of hard green sandstone, tools of the following types have been made by controlled-flaking in the direct-percussion method.

(*a*) *Discoidal scrapers* : rounded pebbles, chipped mainly on the periphery.

(*b*) *Net sinkers* : flat pebbles with two notches along the long sides.

(*c*) *Long scrapers* : long flat pebbles retouched to be used as scrapers or knives.

(*d*) *Grinders* : elongated pebbles with pitted central portions.

(*e*) *Pestles* : elongated pebbles with pitted ends.

(*f*) *Hammer-stones* : oval stones with pitted surface near the ends.

This assemblage has been found at Aksu and it resembles the mesolithic complex of northern China, though the tradition of working on pebbles for tools is as old as the Lower Palaeolithic and as late as the Neolithic. However, the existing evidence shows that it is likely to belong to the neolithic period. A polished-stone knife and, coarse red and fine black pottery were found along with the pebble tools. However, no microlith of the types fonnd in the Gobi deserts could be encountered here.

B. *Pick-axe* : Bifacially worked triangular axe with a definite notch a little below the butt-end. The notch was made, probably, for hafting. The type was found at Chi-Ku-Ching.

C. *Polished grinders and hammer-stones* : These types are found at various sites in the Tarim basin.

D. *Perforated hammer-stone* : A hammer-stone with a large round perforation in the centre of the tool.

E. *Bone points* : There are a few tools.

F. *Bone arrowheads* : There are a few tools.

E and F types are found in the south-west of Turfan, at Yankhoto, and not in the Tarim basin.

### PAINTED POTTERY

There is a strong tradition of painted pottery, in many of the Tarim basin sites; obviously, neolithic in origin. Miao-erh-ku is a typical site for such a material. The surface of the pottery is red or various shades of reddish yellow. Painting has been executed in black and red pigments. The designs include stripes, lines, spruce-twig pattern, etc. The other decorations include incised lines and finger impressions. The popular pottery types are cups and jars, many a time with handles.

## EXTRA-TERRITORIAL CONTACTS

### With Afghanistan, Tadjikistan and eastern Iran

Leaf-shaped round-butted symmetrical points used as arrowheads are fairly wide-spread in Afghanistan, Siestan, Makran and Persian Baluchistan, at sites like Shahr-i Sokhta, Bampur and Chah Husaini. These are often found along with blades and flakes accompanying the Neolithic and Chalcolithic, and also Early Bronze Age, to material, dated 4000-3000 B.C. From southern Persia to Baluchistan and from Baluchistan to Afghanistan, Tadjikistan and then to Lou-Lan seems to be the natural sequence of movement, although it is largely conjectural. In Tadjikistan, from Tut-Kaul, four to five arrowheads of this type, have been reported. They belong to the levels of the Gissar Neolithic culture of 3000 B.C.

The element of parallel-sided blades also seems to be of western and south-western origin. Retouching along one of the two edges for making it an effective reaping tool is certainly not a neolithic central-or southern Chinese element. A survey of the mesolithic cultures of China clearly shows the absence of long retouched parallel-sided blades. In fact, the Mesolithic tool-kit of China is radically different from the Mesolithic tool-kits of western Europe. The Lou-Lan types are akin to those found in the early Neolithic Jericho, Jarmo, Hassauna, etc., in Western Asia, and in the microlithic assemblages of Neolithic Mongolo—Siberian—Manchurian facies: it is also of Soviet Central Asian origin. In this case it comprises of north-east Tadjikistan where there is a distinct neolithic culture. The immediate source of the Lou-Lan complex may also be lying in Mongolo-Siberian group of cultures.

The element of polished stone axes is difficult to tackle with. The use of this tool all over Europe, Africa and Asia makes it difficult to decide whether it originated at one place or at several. Polishing of stone tools started during the mesolithic period itself, but triangular axes became popular only with the neolithic folks. It was in use as far back as 7,000 B.C., *i.e.*, the early neolithic stage, in Palaestine. In all probability, it also entered into the Tarim basin from outside, may be from Tadjikistan, at a late stage, during the 3rd millennium B.C., when it was widely known in eastern Republics of the U.S.S.R. However, it could equally be Chinese in origin if the theory of independent origin of the polished celts in China is accepted.

## Contacts with Central China

Neolithic China had two dominant wares : Red, called Yang-Shao and, Black, called Lung-Shan, as also one subsidiary ware of grey colour.[2] The Red Ware dominates the central region of Kansu, western Honan, Shanzi and Shensi, and the Black Ware the regions east of these provinces. The grey may largely be seen in the north, though quite often present in central China.

In the Tarim basin, plain and painted Yang-Shao Red Ware has been found, *e.g.*, at Miao-erh-ku, some 80 km. east-south-east of Hami[3]. It is also found in northern Sinkiang in the Turfan oasis. The grey ware is also associated with this ware in the Tarim basin. Some of their shapes are common with the Red Ware. The grey ware, it is significant to note, is decorated with basket, toothed comb and cord impressions. A number of smaller sites have also produced the similar evidence. Sinkiang, therefore, gives a definite evidence of cultural influence from central China.

## Cantacts with Northern China

The region of Gobi in northern China has yielded the richest collection of stone tools. Maringer has classified them as follows.[4]

A. *Chipped Flakes*

(i) Older Group: various types of scrapers and engravers.

(ii) Younger Group: pressure chipped tools of bifacial type : arrow-heads, sickle-blades, axes, picks, etc. Bone handles with grooves to insert flakes have come from Kansu, Manchuria and southern Siberia.

B. *Polished Tools*

Celts of basalt, green stone, jade and quartzite; adze, chisel, rubbers, perforated disc-shaped spindle-whorls and digging weights of different stones are included in it.

Even a casual comparison of this assemblege with that of Sinkiang, enumerated earlier, will convince any one of sufficient similarity which exists between the objects of two groups. It may not be just accidental when the two areas are so near to each other. It is interesting to note that these assemblages have been found mixed; mesolithic and neolithic tool-types existing side by side. Aurel Stein attributed this feature to the general lowering down of the implementiferous surface by wind erosion. Though this geomorphological feature is true of the deserts yet all these chips and blades have also occurred in different neolithic sites even in the Fertile Crescent and, therefore, it is difficult to say that here the assemblages are necessarily of two different periods and cultures.

## Contacts with North-Eastern India

The results of recent excavations at Burzahom have established beyond doubt some infiltration of the neolithic culture of China in the Valley of Kashmir during the 3rd-1st millennia B.C.

The excavations at Burzahom, undertaken first[5] in 1936, and then[6] from 1961 till 1968, have yielded evidence of a specific facies of the neolithic culture. It has three phases or periods at the site. Period I, the earliest, is characterized by pit-dwellings, cut into the loessic deposit of the Upper Karewas. These are funnel-shaped, the mouth being narrower than the base, upto 2·74 m in diameter. At the bottom, these are flat and broad, upto 4·57 m across, with depth as much as 39·6 metres. Sometimes, these are provided with landing steps, cut into the Karewas, and a scooped-out passage to connect one pit with the other. The occurrence of charred reed in the ash and the presence of postholes on the surface of the pits, around the mouth, suggest that the pits were covered by a thatched roof. The material excavated in these pits include polished stone celts, bone harpoons, pins, arrow-heads, needles with eyes, awls, steel-grey pottery with mat-impressions at the base, and wheel-turned burnished red ware sherds. On the surface, stone hearths, storage-pits and small pits, 60 to 91 cm in diameter, filled with ash, have also been found.

It indicates that in summer the dwellings shifted to the overground huts.

In Phase II, the dwelling-pits are finally sealed, floored and plastered with mud mixed with red-ochre. Now the houses are found built of sun-dried bricks. A community hall on 45 posts was also in existence. Light and dark grey ware high-necked jar, funnel-shaped vase and stem of a pot with triangular perforations were important finds. Bone tools continued. Three copper arrow-heads were also found, two of them are of the 'double-tang' (?) variety. Human and animal burials in pits occurred for the first time.

Phase III is marked by a few megalithic menhirs and human and animal burials of phase II type. Burials were both primary and secondary. Human bones show red-ochre marks. The animals buried include dog, wolf and ibex. Rectangular and semi-lunar polished harvesters with two holes are typical tool-types of this phase. Such tools were made of stone and bone both.

Many of the traits of this culture are found in China on a larger scale and in an earlier context, suggesting perhaps an infiltration of some of the Chinese neolithic traits in the Kashmir Valley. Perforated harvesters of slate or jade is a fossil type of the Chinese neolithic culture of northern and central China. This type has also infiltrated into Japan in the Jomon Culture of the Neolithic facies[8]. Closely associated with it are the flat celts, each with a perforation at the centre near the butt. They are found in the Tarim basin. They abound in Yang-Shao sites everywhere from Honan to the Kveite Canyon on the Tibet border. During the Early Bronze Age, they are common at Hui Tui in the Too Valley. They were common upto the 1st-2nd century A.D., during the Late Han period. The fact that they occur at Burzahom only in Period III, suggests that they infiltrated into the Kashmir Valley during the middle of the 2nd millennium B.C. It is significant to note that probably during the same time shouldered stone-celts entered into north-eastern India in the Assam region, particularly from Honan in southern China.[9] This was probably the period of southward migration for the neolithic cultures of China. Presently, however, the grey ware in the Tarim basin has hardly any parallel at Burzahom. Pit-dwellings are, however, present in the Ordos, central China, and Yunan, from the Mesolithic times to the late Neolithic period. It is typical of the loessic areas in the temperate zone. The bone tools, used in fishing, sewing, and many other domestic uses have parallels in the sites near the big lakes in Manchuria and southern Russia. Of course, this parallelism does not necessarily imply infiltration when the two areas are so widely separated. Perforated spindle-discs and mace-heads are also found both in China and in India.

It is easier to find similar other parallels but difficult to trace the route of probable intercourse between various regions. Srinagar is connected with China through Gilgit and Sarhad by a somewhat difficult route. The Tarim basin might have been connected with this route, directly by the river Khotan; but at present it cannot be substantiated by archaeological evidence at hand. The other possibility is that the Kashmir Valley was connected with the Swat Valley (Aligrama) by the Jhelum-Indus route. In its turn, the Swat was connected with the Oxus through the Khyber Pass. The Oxus basin in southern Tadjikistan was connected with the Tarim basin through a few passes across the Pamirs. The route was certainly negotiable. In the historical period it was the most popular route. We cannot be more precise than this for want of more material.

## REFERENCES

1. The analysis of the entire collection of the National Museum as has been presented here, is by the author.
2. Stein, A., *Archaeological Reconnaissance in North-western India and South-western Iran*, (London, 1937).
3. Cheng Te-kun, *Archaeology in China*, Vol. I, Prehistoric China, (Cambridge, 1959), pp. 73-95.
4. Maringer, J., *Contributions to the Prehistory of Mongolia*, (Stockholm, 1950.)
5. De Terra, H., "Excavations at Burjhama", *Miscellanea of the American Philosophical Society*, 1936.
6. *Indian Archaeology—A Review*, New Delhi. Yearly publication of the Archaeological Survey of India, from 1961 to 1968.
7. Cheng Te-kun, *op. cit.*, pp. 89, 98.
8. *Ibid.*, pp. 127 ff.
9. *Ibid.*, pp. 135 ff.

# *APPENDIX II*

# SOVIET SCHOLARS ON ARCHAEOLOGY AND INDO-ARYANS

## "GREY POTTERY", PAINTED POTTERY" AND THE INDO-IRANIANS

**BY GRANTOVSKY**

1. The origin and settling of the Indo-Iranian tribes is being studied on the basis of wide-ranging materials, including archaeological. Basically, however, the "Aryan problem" is a historico-linguistic one, linguistic and comparative historical data taking priority over others. Archaeological data play a great and growing role in its solution only if they are concretely correlated with historico-linguistic conclusions.

On the territories lying between the early Indo-European area of Europe and India, a wide variety of archaeological cultures are being associated with the Aryans, the identification of some of them as Indo-Iranian ruling out similar identification of a number of others. At present, in the absence of other safe archaeological criteria, it is expedient to proceed primarily from whether the overall economic, domestic, social, etc., outlook of the bearers of the given culture can correspond to the historico-linguistic material pertaining to the Aryans of that epoch. The emergence and spread of new forms and decor of pottery and other similar distinctions of material culture themselves cannot offer a necessary argument;

such phenomena, whether or not they indicate a new ethnos, were also recorded before the advent of the I do-Iranians.

2. The author has his own views onthe theories connecting the Aryans with the prehistoric (which arose before the 1st millennium B.C.) land-tilling cultures of southern Central Asia and the neighbouring part of the Iranian Plateau. Some of the researchers categorize the cultures of painted pottery (which on Namazga-like complexes had yielded place to non-painted since the boundary between the 3rd and 2nd millennia B.C.) going back to the 3rd millennium B.C. and even much more ancient as Aryan, assuming that the Aryans had been living in this area, moving in the direction of India from the close of the 3rd millennium, to be followed by Iranian culture—the local cultures usually of painted ("late") pottery, of the early part of the I millennium B.C. Other researchers associate with the Aryans "grey" (or "black") pottery, which had been replacing painted pottery in the settlements of Gorgan since the 4th-3rd millennia. In its infiltration to east and west at the close of the 3rd millennium and in the 2nd millennium they see traces of migration of the Indo-Iranians (or the Indo-Aryans) and in its prevalence in north-western Iran since the 14th-13th centuries B.C., the result of an Iranian Advance to these areas.

In the context of the Aryan problem these are kindred theories in terms of the types of the above-mentioned land-tilling cultures, which grew into "proto-urban" ones, and of the time of the Aryans' life in southern Central Asia and north-eastern Iran, and of their subsequent spread in southern areas. Some of the authors even combine the two theories. At the same time, on infrequent occasions it is being noted that the tribes of the northern steppe zone were Aryan-Iranian or east-Iranian, which later partially moved south. But sometimes it is even assumed that initially precisely the southern agricultural population was Aryan while the Aryanization of the steppe population was the result of influences and migrations from the south.

The Indo-Iranians—ancestors of the Indo-Aryans and the Iranians—reveal uniformity and similarity in details of the economy, everyday life, customs, social system, religion, etc. The assumption that various Indo-Iranian groups lived in entirely different economic and cultural conditions is inapplicable to the epoch of Aryan community and some period following its disintegration.

There are no data to show the spread of Aryan languages in the agricultural area in question but undoubtedly were to be found in the steppe zone in the 3rd-2nd millennia B.C., including the Indo-Iranian linguistic epoch. According to a variety of data, the Aryan tribes maintained ties until the early half of the II millennium B.C. *Consequently, till they had lived in the steppe zone, the land-tillers of southern Central Asia and Iran could not be Aryans.*

4. The Indo-Iranians are described as steppe-type stock-breeders and land-tillers (with stock-breeding prevailing), *i.e.* as pastoral tribes which practised subsidiary agriculture, etc. In any case, they cannot be identified with

the agriculturists of Namazga IV-V, Hissar III, etc,. An economic, domestic and social pattern close to all-Aryan was also peculiar to the Iranians (who lived in the same steppe zone in the all-Iranian period) and was reflected back in the Avestan tradition. The Indo-Aryans largely retained it in India back in the Rigveda epoch. A juxtaposition of the culture of the Indian Aryans of the Vedic period, including (on the basis of) the material provided by their settlements going back to the early centuries of the I millennium B.C., with the steppe cultures and realigion of the Rigveda and Avesta with comparative Indo-Iranian material reveals a line of development which left no room for many elements characteristic of the "proto-urban" civilization, including "palaces" and temples (which are also being uncovered in monuments of the Dashly type; complexes like Sapalli tepe in economic and other indices could not belong to the Aryans of that time either).

5. The population of the land-tilling cultures of southern Central Asia (of the Namazga VI, Sapalli, and other types) and northern Afghanistan (Dashly, etc.) of the second quarter —the end of the 2nd millennium B.C.— is believed to have come from the areas of earlier cultures like Namazga, Hissar and others in "Khorassan" and Gorgana. But these cultures could not be Indo-Iranian (cf. items 3, 4 and 6).

The view that these migrations from Khorassan eastwards were related to the spread of east-Iranian language is obviously untenable historico-linguistically. Other scholars assume that the same monuments marked Indo-Aryan advance towards the Indian border. But the cultural and economic type of these monuments sites and the Vedic Aryan are incomparable (cf. above).

The assumption that the stay of the Indo-Iranians in north-eastern Iran goes back to very distant times is based on conclusions concerning the origin of the Gorgana (Dahistan) grey pottery.

6. In turn, these conclusions are based on the fact that until the later half of the 4th millennium B.C. the grey pottery discovered in Gorgana was found to be increasingly ancient. This, however, furnishes still more graphic evidence that its emergence is not related to the Aryans. They became isolated from the Indo-European area in the middle of the 3rd—the middle of the 2nd millennia. But even if the correct date was the earlier of the two, the Aryans could not reach north-eastern Iran until after several centuries. A comparison of archaeological data obtained in Europe with the distinctions of the Aryans' economy and social system which emerged back in the epoch of their contacts with other Indo-Europeans reveals that these contacts persisted until the beginning of the 2nd millennium B.C.

For a long time the zones of food-production economy of Europe and southern Central Asia were divided by a vast but gradually shrinking territory of food-gathering economy. In Central Asia the Neolithic cultures (which at the later stage could not be Aryan either) go as far back as the end of the 3rd millennium, pottery finds also confirming their concurrence with the grey pottery complexes of Gorgan (Shah-Tepe, etc).

7. For all these reasons the monu-

ments (sites) of Gorgana with grey pottery from its emergence to the Hissar III—Tureng III period inclusives can not beviewed as Aryan. It remains to acknowledge that it belonged to the Iranian tribes in north-western Iran, where grey pottery dominated monuments of Iron Age I (Hasanlu 5 : 14th-13th—11th centuries) and Iron Age 2 (Hasanlu 4 : 10th-9th centuries) while the Iranian-speaking population prevailed there already in the closing third of the 2nd millennuium B.C. But Cuneiform sources do not permit to assume that it was widespread in western Iran before the 11th-10th centuries. Alongside the distribution of the "Iranian", the old ethnic retained their positions in many areas even in the 9th-8th centuries. Their replacement by Iranian groups in the 9th-7th centuries in the light of data contained in written sources could not begin in the 14th-13th centuries.

By the 9th-8th centuries the key political and "urban" centres still belonged to the non-Iranian-speaking population (the Iranians did not have them at the beginning). These cities were also the centres of crafts and depending on the traditions of the pottery, its type depending on local population.

Contrary to the current view, the population ot Hasanlu itself—this "standard" monument (site) of the grey pottery of western Iran—was not "Iranian" either. Excavations of Hasanlu disclosed a stone bowl with a caption mentioning the palace of the ruler of Ida (Idi). This "country", or "city", was also mentioned in 9th-century Assyrian texts. A comparison of their data with the site where the bowl was discovered leaves no doubt that Ida was the ancient name of Hasanlu. Relevant onomastic data furnish evidence that the Hasanlu population was not Iranian-speaking until the end of the 9th century.

8. The "grey pottery" was employed in Iran by the non-Indo-European population both before and after the advent of the Iranians, who had taken it over from the autochthons. The prehistoric land-tilling painted pottery cultures were not Indo-Iranian, Indo-Aryan or Iranian. The new spread of painted pottery during the 8th-7th centuries in western Iran post-dated the spread of the Iranian tribes (also including the areas which still did not belong to the "Iranians") and was not the result of the emergence of a new population.

The archaeological culture of western Iran of the close of the 3rd—the early centuries of the I millennium brings together variously-originated and variously-oriented elements which arose from local traditions, influences and relationships. The contribution of the Iranian tribes can be discerned with an eye to historico-linguistic data. The corresponding analogues in the north-west, in the eastern Transcaucasus or also further north. At least some of the west-Iranian tribes penetrated via the Caucasus. While other west-Iranian tribes proceded to Iran and east of the Caspian Sea they must have advanced from the same areas (including the Volga area and economically and culturally related regions) at about the same time.

Most of the "east-Iranian" tribes remained steppe ones some of them advancing to already "agricultural" areas or expanding their territory and going over to settled life in the previously "steppe" areas of Central Asia.

## THE ORIGIN OF THE INDO-IRANIANS IN THE LIGHT OF RECENT ARCHAEOLOGICAL DATA

BY Y.Y. KUZMINA & K.F. SMIRRNV

1. In the 14th century B.C., according to P. Thieme, M. Meyrhofer and V.V. Ivanov, the Indo-Aryans already became isolated in Asia Anterior. It follows that the Indo-Iranian contacts in their original homeland antedate the middle of the 2nd millennium B.C.

2. A promising method of localizing the Indo-Iranians original homeland is by comparison of their early culture, which is being reconstructed from linguistic data, and with the data of archaeology.

3. The Indo-Iranians practised land-tilling, stock-raising, metallurgy, pottery, weaving, bee-keeping and employed the wheel transport (evidence of this is common in Indo-European names of cereals, chaff, domestic animals, wool, milk, metals, cart, wheel, yoke). This corresponds to the archaeological Neolithic and Bronze Age cultures beginning from the 3rd millennium B.C., when the wheel transport gained ground in Asia Anterior, Central Asia, Iran, the Caucasus, south-eastern and central Europe.

4. The mainstay of the Indo-Iranian economy was formed by stock-raising dominated by the breeding of horned and small cattle and, still more, the horse (hence, the abundance of stock-and horse-breeding terms, metaphors for gods like "grass land magnate", "offering gifts of animal wealth", "possessing fast horses" or "swift-horsed sun"; the horse's role in mythology and sacrifice). *Linguistically, the Indo-Iranians reveal no cities, fortifications, palaces, temples, writing, irrigation, specialized crafts or trade.*

5. In the light of archaeological data this precludes localization of the ancient Indo-Iranian homeland in the 3rd millennium-early half of the 1st millennium B.C.

(I) in Mesopotamia and other advanced centers of Asia Anterior;

(II) in the zone of second-order civilizations like Anatolia, Iran or southern Central Asia, with their economic foundation comprised by land-tilling (frequently irrigation-based), fortified cities, palaces, temples, specialized crafts and trade (Geoy-tepe, Kyul tepe, Shengavit, Gudabertkha, Karas, Tepe-Hissar, Shah-tepe, Tureng-tepe, Altyn-depe, Ulug-depe, Namazga, etc.);

(III) or in the culture of the stock-breeding communities (which were to be found in the deserts and mountains of Asia Anterior and, according to Klengel and Van de Walz, who cultivated exclusively sheep).

6. In the study of the Indo-Iranian problem, data pertaining to the history of horse-breeding in the Old World are of no importance. In Asia Anterior the horse has been known since the 3rd millennium B.C. but has not played any role in the economy (there are no horse bones in the settlements except Tel Selenkai), the military art (there were no developed types of harnessing or mounting or training skills). The data on horse-breeding in southern Central Asia and Iran in that epoch are highly questionable and there are no horse bones here. In the

Transcaucasus horse-raising, which, according to S.K. Mezhlumyan, was borrowed from the south-Russian steppes, was practised but it did not play a major role (horse bones, except in Shengavit, add up to a small proportion). There are no horse ritual graves in the whole area.

7. According to V.I. Tsalkin and V.I. Bibikova, the horse was domesticated in south-eastern Europe in the 4th millennium B.C. In the 3rd millennium B.C., according to N.Y. Merpert D.Y. Telegin, O.G. Shaposhnikova and V.P. Shilov, the steppes, from the Dnieper in the west to the Ural in the east, revealed the development of integral stock-breeding-dominated economy with a prevalence of horned and small cattle and, still more, horses (in several settlements upto 60-80 percent of the bones discovered belonged to horses); metallurgy, pottery, weaving and bee-keeping were practised and the wheel transport employed. This zone, for the first time in the Old World, developed a horse cult (images of the horse on sceptres in Suvorovskaya and Orsk and on stelae in Usatovo; ritual graves in Dereivka and Syezzhaya and graves of pit-grave culture). This puts the archaeological reconstruction of the culture of the south-Russian steppe population of the 3rd millennium—early 2nd millennium B.C. in excellent agreement with the linguistic reconstruction of the culture of the early Indo-Iranians.

8. Of major importance in the Indo-Iranian culture of the 2nd millennium B.C. were horse-drawn chariots (a large number of terms, the role of chariots in mythology, the term "rataishtar"—"standing on chariot"—for the war aristocracy). The spread of horse-drawn chariots in Asia Anterior in the middle of the 2nd millennium B.C. is associated with the Indo-Aryans (borrowed Indo-Aryan training terms in horse-breeding treatises by Kikkuli etc. (A. Salonen, A. Kammerhuber); the Indo-Iranian title "horse-driver"; the Indo-Iranian names of Mitanni rulers "Having the running chariots", "Facing the chariots", "Having the big horses".

9. Archaeological evidence of the emergence of horse-drawn chariots is the discovery in the Sintashta grave of the Novy Kumak tepe, near the Urals, of a chariot with spokes and horses with round cheek-pieces with spikes and the discoveries of similar cheek-pieces in the catacomb-grave and Abashevo cultures and the culture of pottery with many bands in the south-Russian steppes. These cheek-pieces go back to the 16th century B.C. being a prototype of the round metal cheek-pieces of Asia Anterior. This supports the hypothesis that the original Indo-Iranian homeland was located in the south-Russian steppes and that the Indo-Aryans played a role in spreading the chariots in the Near East.

10. Near the Urals and in Kazakhstan the authors have singled out the Novy Kumak type monuments of the second quarter of the 2nd millennium B.C., which they believe was an early stage of the Andronovo ethnocultural community. Evidence of the genetic relationship with the Andronovo culture is the similarity of the economic types dominated by ox-and horse-breeding, dwellings, metal items and ethnic indicators : burial rite, the cults of the horse and fire, traditions of pottery and the ornament.

II. In the Novy Kumak complex the authors have discovered the extremely intensive effect of the south-

Russian steppe cultures—the Poltavka and Abashevo cultures and the culture of pottery with many bands (the Novy Kumak forms of ware ornaments, metal artifacts and round-cheek-pieces go back to their Western prototypes). It follows that crucial factors in the formation on the Andronovo ethnocultural community at the Novy Kumak stage were the Western impulses and migration from the south-Russian steppes of the population which assimilated the aborigines of the Urals and Kazakhstan.

12. According to the hypothesis of M.M. and I.M. Dyakonoff, Tolstov and Bernshtam, the Andronovo people were Indo-Iranians. Archaeologically, this is supported by the genetic continuity between the culture of the Iranian-speaking Saka and that of the Andronovo ethnocultural community. The conclusion concerning the crucial role of the Western impulse in the formation of this community is in good agreement with the hypothesis of G. Morgenstierne, T. Burrow and I.M. Dyakonoff concerning the settling of some portion of the Indo-Iranians who came from their original homeland in Kazakhstan and Central Asia in the latter half of the 2nd millennium B.C.

13. The archaeological data on the cultural influence of the Andronovo ethnocultural community in the forest zone of the Urals and Western Siberia (the borrowing of land-tilling, stock-raising, metallury, the horse cult and the Andronovo ornaments) dovetail with the disclosed linguistic contacts between the Indo-Iranians and the Ugro-Finns.

14. The discovery in the Novy Kumak type graves of the remains of warriors together with sets of ornaments, horses, and in some places chariots, accords with data indicating social differentiation among the early Indo-Iranian and the isolation of charioteers (rataishtar, maryanni).

## LOWER MURGAB IN 2nd MILLENNIUM AND ITS DEVELOPMENT BY LAND-TILLING TRIBES

BY I.S. MASIMOV

1. The lower Murgab, which, for a long time, remained in the shadow, under the influence of the findings obtained in excavations of settlements of the submontane strip of the Kopet Dagh has again attracted the researchers' attention. The discovery of many monuments of ancient land-tilling here lends a new quality to the reconstruction of the history of this part of Turkmenia.

2. Judging by preliminary data, the initial attempt at developing this river's delta by the agricultural tribes were made back in the Eneolithic. There are reasons to believe that a small group of people who had come from the Geoksyur Oasis, following its final decay at the close of the 3rd millennium B.C., made their home here. Indirect evidence of this is the climatic and morphological distinctions of the basins of the Tedjen and the Murgab, which are very much alike.

3. The main period of development of the lower Murgab area fell on the Bronze Age (2nd millennium B.C.). This process is here having two stages which are clearly characterized by data obtained in recent years. The first stage fell on the second quarter of the 2nd millennium B.C., when the monuments of the submontane strip did not yet show signs of the impending crisis

4. In the Murgab area the first stage of development is represented by settlements of the Kelleli Oasis. Stratigraphic data reveal their monostratum character. The developed material culture shows features of similarity with that of the submontane strip settlements (Altyn-Depe, Namazga-Depe). This suggests that this oasis was peopled by migrants from this territory.

5. At the second stage (the middle and third quarter of the 2nd millennium B.C.) another wave of people, numerically large, occupied a vast territory south of Kelleli. This second wave is attributable to a critical situation in the submontane strip settlements. Dozens of new settlements formed individual oases (Taip, Adambnsan, Adjikuin, Gonur). The material culture reveals a persisting trend toward the development of local elements.

6. The presence in this complex of things (stone seal-amulets, objects of art) previously entirely unknown to the local population, the emergence of fortified settlements and those with fortresses and towers fortified at the corners are obvious indications of the advent of fresh contingent of people with alternative cultural traditions, which are also typical of Bactrian culture. This brings these territories together into one historic-cultural entity.

7. By the close of the 2nd millennium B.C. life, in a number of settlements of the lower Murgab, south of the above-mentioned oases (for instance, the Togolok Oasis) in whose upper strata occur materials of the culture of Yaz I, had become less intensive but continued. The spread of these monuments to the south of the Bronze Age oases reveals a gradual transition from one historico-cultural community to another.

8. The mainstay of the economy of the Bronze Age Murgab tribes was formed by irrigated land-tilling. A substantial role was played by stock-raising. This is evidenced by the herd composition. Extensive use was made of draft animals. Trade with the neighboures furthered the intensive growth of domestic crafts.

9. The abundance of Bronze Age settlements discovered in recent years in the lower Murgab area (already more than 100) opens up tempting prospects before the researchers. An integral approach to the study of these settlements will undoubtedly yield answers to many questions awaiting solution. This includes the problem of the origin of the Indo-Iranians.

## SOUTHERN UZBEKISTAN IN THE 2nd MILLENNIUM

BY A. ASKAROV

1. Archaeological research conducted in southern Uzbekistan has revealed its extensive development in the Stone Age, ancient times and the subsequent periods. However, until recently, the history of a whole epoch, chronologically ranging from the Stone Age to the era of Early Class Society, remained a 'blank spot', substantially impeding the study of local sources and the overall genesis of the ancient culture of this region.

2. The extensive archaeological excavations conducted in recent years in southern Uzbekistan and neighbouing northern Afghanistan have made a substantial correction in the study of the genesis of the Urban cultures of early class society in a large part of

what are now Uzbekistan and Tajikitan permitting to single out a new Amu-Darya local focus of highly developed ancient Oriental cultures; which subsequently offered the basis for the formation and development of the urban cultures of archaic and ancient Bactria and Sogd.

3. This extensive research has shown that the Amu-Darya focus of ancient Oriental civilization had two centres—one in what is now southern Uzbekistan and the other on the territory of present day northern Afghanistan. In the former centre scholars have discovered and explored a large number of monuments of two ancient land-tilling cultures—the Sapalli and the Kuchuk-tepa cultures—which go back to different times. The former was singled out as a result of wide-scale study of monuments like the settlements of Sapalli tepa, Jhar kutan, Bustan and Molali and their graves (13 monuments in all) while the latter is represented in the excavations of the settlements of Kuchuk-tepa, Mirshadi, Bandykhan 1, etc.

4. The Sapalli culture in the outlook of its archaeological material examplifies a highly-developed ancient Oriental type culture which genetically goes back to the Namazga-type cultures of the submontane strip of southern Turkmenia. Its features were life in settlements, the presence of developed architecture with close-spaced houses, street layout of block-divided settlements (Sapalli tepa), extremely high level of development of basic crafts, like metallurgy with elements of jewellery art, and of pottery based on the utilization of the potter's fast wheel, stone cutting for the manufacture of various forms of decorations, mostly semi-precious stone beads, etc.

The sophisticated defence system combined with a profound tradition of building and layout devices employed in Sapalli-tepa type monuments was a unique sample of early urban elements on the territory of what is now Uzbekistan and neighbouring Tajikistan and are comparable to the square fortress of Vara, which is known in the Avestan tradition.

Large-size excavations of Sapalli tepa, with its rich material of the graves inside the settlement, as well as of the Jharkutan necropolis, have revealed that the south Uzbekistan centre of highly developed ancient-Oriental-type cultures as represented by the Sapalli tepa culture had three consecutive stages—Sapalli tepa, Jharkutan and Molali—in its development from the 17th to the 10th century B.C.

5. The extensive study of the monuments of the late Bronze and early Iron ages in southern Uzbekistan has yielded interesting data on the Kuchuk-tepa culture. The creators of the Kuchuk-tepa type monuments evolved so distinctive a culture with a vivid ethnographic outlook that it cannot be viewed as simply a direct sequel to the preceding Sapalli-tepa culture. On the one hand, it was a continuation of the cultural and economic development of the previous period but the archaic make-up of its handmade coarse painted ware, so to speak, suggests a comeback of more ancient traditions of the Eneolithic. However, land-tilling here retained its former economic role. The same applies to stock-breeding. The architectural and building devices typical of the Sapalli culture survived without any substantial changes. It appears to the author that the character of culture indicates precisely the combination of ancient

local traditions and new elements brought by the Chust-type tribes, which effected a change-over to settled agriculture and stock-rearing among the Bronze-Age communities which inhabited the steppes back at the close of the 2nd millennium B.C.

6. The inhabitants of the south-Uzbekistan centre created a rich distinctitve complex of material culture ranging from fortresses which were square if viewed from above to graceful forms of high-quality ware and specific-style seal-emblems. The flowering of cultures of the early agricultural tribes of the area under study fell on the middle and the latter half of the 2nd millennium B.C.—precisely the time when the historical situation in the zone which lay between Sumer and the Indus Valley recorded substantial changes due to the decline of ancient centres (Altyn-Depe, Namazga Depe, Tepe-Hissar, Shahr-i Sokhta, Mundigak). That time also brought an abrupt regression to the Indus Valley, where the settled communities of early urban cultures, as it were, registered a reversal to the pre-literate stage due to the degradation of the Harappa culture.

7. At the same time, the Amu Darya focus of highly developed ancient-Oriental-type cultures retained and further developed the main cultural and economic achievements becoming a zone of intensive development which anticipated the remarkable accomplishments of the semi-legendary ancient Bactrian kingdom.

8. The rich material uncovered in the study of both centres of the Amu-Darya focus at highly developed cultures supported the thesis that the ancient Bactrian Kingdom had antedated the Achaemenid Empire—a substantial contribution to the history of Central Asia and adjacent parts of Afghanistan.

## ANCIENT BACTRIA : NEW ASPECTS OF AN OLD PROBLEM

BY V.I. SARIANIDI

1. The discovery of a uniform Bactria-Margiana archaeological complex, in addition to specifying presumptive Indo-Iranian relationships, substantially complements them by more westerly analogies. Occupying an intermediate position, the said complex discloses parallels both in the west (Iran) and the east (the Indus Valley) suggesting the outlines of the historical processes which took place here in the 2nd millennium B.C. However, a substantial barrier to the specification of the evidence is the amazing conservatism and survival of metal artifacts (they are more than 1000 years old!) in the Irano-Turkmenistan metallurgical province.

2. Among the common Irano-Afghano-Indian analogies are pottery forms : vases on legs, vessels with rim spouts, triple vessels, supports with drawings of trees, bud-shaped stone artifacts, drawings of trefoils and pipal, biconical round-ornamented stone spindle-whorls, metal ware.

Here are a few more concrete comparisons.

3. The Bactrian cosmetic vial are similar to their counter parts of Chanhu-Daro, Tepe-Hissar and Turkmenistan,

4. The Bactrian pins with characteristic figure pole-heads (animals, birds) directly echo those of Mohenjo-Daro, Harappa, southern Turkmenistan and Tepe-Hissar. Possible relationship with Luristan is documented by pins with pole-heads shap-

ed as oxen's heads with anthropomorphized eyes.

5. The Bactrian mirrors with antropomorphic handles are close to the Baluchistani ones going back to their Luristani prototypes.

6. The Bactrian axes resemble those of Chanhu-Daro, Tepe-Hissar and Turkmenistan. The ritual axes with butts shaped as "rooster's tails" obviously originated from the Luristani ones.

7. The Bactrian bronze pole-heads shaped as protomas of animals (horse, wild boar, etc.) as well as maces with pins, tripods ending in hooves have unquestionable analogues among the Luristani bronze artifacts. As a whole, the Bactria-Margiana metal items exemplify a simplified imitation of the corresponding Luristani bronze objects.

8. Glyptics. The Bactrian compartmented metal seals have most of their analogues in Turkmenistan and on the Iranian Plateau while the stone amulets of what is known as the Murghab style both in the east (the so-called Jhukar ones) and in the west (Elam); the images of winged people almost echo the winged geniuses of Mesopotamia.

9. The new data reveal at least two periods of Indo-Iranian relationships. The first corresponds to the Harappa time and, as a whole, remains within the bounds of normal cultural interrelations. The second corresponds to the post-Harappa period of Jhukar, when anthropomorphic plastics yielded place to Jhukar-style amulets; and the burial rites and the overall outlook of the pottery art changed suggesting the advent of a new population.

10. Similar changes then occurred in southern Central Asia and partly in Iran. This indicates major tribal movements whose sources go as far as western Iran. A possible Caucasian component is revealed by forklike tools, which come from the graves of the Caucasus, Sialk, Tepe-Hissar-Asterabad and Bactria. This presumed migration could proceed : 1) via the north—through Khorassan and Bactria as far as the Indus Valley and, 2) via the south—along the Persian Gulf.

11. The possible Indo-Iranian origin of the migrant tribes is supported by the following indirect observations. The unquestionable genetic continuity between the development of the Bactria-Margiana archaeological complex from the Bronze Age through the Achaemenian period up to the ancient times (almost 1500 years!) retrospectively may indicate the east-Iranian linguistic family—something which for ancient Bactria is documented by the Surkh-Kotel and Dalverzin writings.

The monuments of applied art (reflecting, in the final analysis, mythological concepts) include birds, camels, winged lions, griffons, oxen, snakes, frogs, fishes, dragons, *i.e.*, personages which are among the Avesta and Rigveda images. There are particularly many images of the swastika and a tree with goats. There is indicative stability of the plot composition : a snake stealing sperm from an animal (including the ox) resembles both iconographically and semantically the subsequent cult of Mitraism.

An exceptional interest is presented by stone amulets with pictures which are literally permeated by the dualistic concept of struggle between good and evil. The particularly important role of stock-breeding is revealed by the ritual burials of rams.

12. Although the question of the Indo-Iranian settling is highly controversial, it is obvious that the *Andronovo tribes had no direct bearing on this problem.* This does not exclude the usual reciprocal contacts between the steppe and land-tilling tribes. The turnk-line of the historical processes in the middle-the later half of the 2nd millennium B.C. in this part of south-west Asia skirted the steppe periphery of Central Asia. This primarily holds for the post-Harappa Jhukar culture, which took shape under the influence of the migrant tribes that were culturally close to the Bactria-Margiana archaeological complex.

**NOTE** : These notes are from the *Abstracts of papers presented by Soviet Scholars* (1977) at Dushambe Conference.

# RESUMÉ

The analysis of the Soviet scholars also shows that archaeologically it cannot be proved that the Vedic Aryans came either from the Dahistan-Kopet Dag region of western Turkmenia and northern Iran, or from Tedjen-Murgab deltas of south-eastern Turkmenia, or from the Oxus basin in southern parts of Uzbekistan and Tadjikistan and northern parts of Afghanistan. (See also Thapar 1970, 1977).

The analysis also shows that the problem of the original home of the Indo-Europeans cannot completely be imposed on the problem of the Vedic Aryans.

Distributional analysis of artefacts shows sporadic occurrence of Central Asian objects on the Indian borderlands and in the Indus basin (Thapar 1977) but this phenomenon can at best be interpreted in terms of exchanges—in totality none of the Central Asian protohistoric cultures could ever travel up to the Indo-Gangetic divide, the original home of the Vedic Aryans.

# LIST OF ABBREVIATIONS

| | |
|---|---|
| AP | *Ancient Pakistan* |
| *Archaeologia,* AN SSR | *Arkheologii, Akademiya Nauk, USSR* (*Academy of Sciences*) |
| Arkh. Otkr. | *Arckheologicheskiye Otkrytiya* (*Archaeological Discoveries*) |
| COWA | *Council for World Archaeology* |
| EW | *East and West* |
| IAR | *Indian Archaeology—A Review* |
| IMK | *Istoriya Materialnoy Kultury Uzbekistan* |
| Izv. ANT | *Izviestiya Arkheologii Nauk Turkmen SSR, Ashkhabad* |
| ITN | *Istoriya Tadjikskogo Naroda* (*History of the Tadjik People*) |
| JAOS | *Journal of the African and Oriental Studies* |
| JFA | *Journal of Field Archaeology* |
| JNES | *Journal of the Near Eastern Studies* |
| KS | *Kratkiye Soobshckeniya Instituta Arkheologii* (*Brief News of the Institute of Archaeology*) |
| MIA | *Materialy i Issledovamiya po Arkheologii SSR* (*Materials of and Research into the Archaeology of the USSR*) |
| M & E | *Man and Environment* |
| PA | *Pakistan Archaeology* |
| SA | *Sovietskaya Arkheologii* (The most leading quaterly journal of Soviet archaeology) |
| IV SAA | *Fourth International Conference of South Asian Archaeology*, Naples (1977) |
| Tr. | *Trudy* (Reports) of different Republics and Institutes |
| Tr. AE | *Trudy Arkheologii Etnografic* |
| Tr. IIAE | *Trudy Institute Istorii Arkheologii i Etnogrofii* |
| Tr. Kh. E | *Trudy Khorezmskoy Arkheologo-Etnografichskoy Ekspeditzii* |
| Tr. M. Kh. E. | *Trudy Materialy Khorezmskoy Ekspeditzii* |
| Tr. YUTAKE | *Trudy Yuzhno-Turkmenskaya Arkheologicheskaya Kompleksnaya Ekzpeditzia* (Southern Turkmenistan Joint Archaeological Expedition) |

# LIST OF JOURNALS OTHER THAN THOSE MENTIONED IN THE LIST OF ABBREVIATIONS

*American Antiquity*
*Afghanistan*
*Ancient India*
*Antiquity*
*Archaeology*
*Artic Anthropology*
*Bulletin of the Metropolitan Museum*, New York
*Expedition*
*Iran*
*Journal of the American Oriental Society*
*Journal of Central Asia*
*Puratattva*
*Radiocarbon*
*Science*
*South-Western Journal of Anthropology*

# *Bibliography*

Adams, R.C. 1966 *The Evolution of Urban Society* (Chicago)

Agrawal, D.P. 1971 *Copper-Bronze Age in India* (New Delhi)

Agrawal, D.P. 1978 "Recent Developments in Prehistoric Researches in USSR' *M & E*, Vol. II, pp. 113-115

Allchin, B. and Allchin, R. 1968 *The Birth of Indian Civilization* (Pelican)

Allchin, B. 1973 "Blade and burin industries of West Pakistan and Western India", in N. Hammond (Ed.) *South Asian Archaeology* pp. 39-50

*Alpysbayev, Kh. A. 'Palaeolithic of South Kazakhstan', *SA* I

*Alpysbayev, Kh. A. 1962 'Palaeolithic of Karatau', *Tr.* 14.

Askarov, A. 1962 'Andronovo tombs in Zeravshan Valley', *IMK* 3

*Askarov, A. 1973 *Sapalli Tepa*

Asthana, Shashi 1976 *History and Archaeology of India's Contacts with other Countries : from Earliest times to 300 B.C.* (Delhi)

Asthana, Shashi 1977 "Megalithkulturen in Indien Zur Frage ihrer Herkunft und Verbreitung", *Zeitschrift Fur Archaeologie*, 11-77$_1$, pp. 1-12

Asthana, Shashi 1978 "Mesopotamian Urbanism vis-a-vis Harappan Urbanism" *M & E*, Vol. II, pp. 47-50

Asthana, Shashi 1978a "Banawali and other recently excavated Harappan sites in India", IV *SAA* (Abstracts)

Asthana, Shashi 1979 "Indus—Mesopotamian Trade : Nature of Trade and Structural Analysis of Operative system," in *Essays in Indian Protohistory*, Agrawal & Chakrabarti (Eds.) pp. 31-47

Asthana, Shashi 1979a "Harappan Interests in southern Iran", *M & E*, Vol. III, (in press).

Audouze F. and Jarrige, C. 1977 "A Third millennium Firing Structure at Mehrgarh and its Economic implications", *4th Intn. Conf. of South Asian Arch.* (Abstracts) Naples, 1977 (hereafter abbv. as IV *SAA*, 1977)

Banerjee, N.R. 1968 *Iron Age in India* (New Delhi)

*Berdyiev, O.K. 1964 'Survey of Turkmenian Archaeology since 1921', *Izv. ANT* 5

*Berdyiev, O.K. 1968 "Chakmakli-Depe—

A New site from Anua IA Period", *Istoriya Arckheologiya i Ethnografiya Svednei Azii* (Moscow)

Biscione, R. 1973 "Dynamics of an Early South Asian Urbanization : The first period of Shahr-i Sokhta and its connections with southern Turkmenia" in *South Asian Archaeology*, (Ed.) N. Hammond, (London) pp. 105-118

Biscione, R. 1974 "Relative Chronology and Pottery Connections between Shahr-i Sokhta and Mundigak, Eastern Iran", *Studi di Palentologia Palaeoantropologia Paleontologia e Geologia del Quaternario*, Vol. 2 (NS) pp. 131-145

Bovington, C.H. *et el* 1974 "The Radiocarbon Evidence for the Terminal date of the Hissar IIIC Culture", *Iran*, Vol. XII, pp. 195-199

Braidwood, R.J. 1952 *Near East and the Foundations of Civilization* (Eugene, USA)

Braidwood, R.J. and Willey (Eds.) 1960 *Courses Toward Urban Life* (Chicago)

Caldwell, J. R. 1967 *Investigation at Tal-i-Iblis*, Illinois State Museum Preliminary Reports, No. 9 (Springfield, III)

Casal, J.M. 1961 *Fouilles de Mundigak*, Memoires de la Dele'gation Archeologique Franciase en Afghanistan, Vol. XVII (Paris)

Chakrabarti, Dilip, K. 1977 "India and West Asia—an Alternative Approach", *M & E*, Vol. I, pp. 25-38

Chakrabarti, Dilip, K. 1978 "Lapis Lazuli in Early India", *M & E*, Vol. II, pp. 51-58

Childe, V.G. 1954 *New Light on the Most Ancient East* (London)

Childe V.G. 1957 "The Bronze Age" in *Past and Present*, 12 Nov., p. 2-15

Clarke, D.L. 1968 *Analytical Archaeology* (London)

Clarke, D.L. 1973 "Archaeology : The Loss of Innocence", *Antiquity*, Vol. 47, pp. 6-18

Compagnoni, B. 1977 "Faunal Remains from Protohistorical Settlements of Swat, North Pakistan", IV *SSA* (Abstracts) p. 33

Costantini, L. 1977 "Notes in the Palaeobotany of Protohistorical Swat", IV *SAA* (Abstracts) pp. 27-32

Chard, ch. S. 1960 "Yarim Tepe in Iran", *Bulletin Metropolitan Museum*, New York, (April)

Dales, G.F. 1962 "Harappan Outposts on the Makran Coast", *Antiquity*, Vol. 36, pp. 86-92

Dales, G.F. 1962 (b) "A Search for ancient Seaports", *Expedition*, Vol. 4, pp. 2-10.

Dales, G.F. 1965 "A suggested chronology for Afghanistan, Baluchistan and the Indus Valley" in E. Ehrich (Ed.) *Chronologies in the Old World Archaeology*, (Chicago) pp. 257-284

Dales, G.F. 1968 "Of Dice and Men", *JAOS*, Vol. 88, No. 1, pp. 14-23.

Dales, G.F. 1971 "Early Human Contacts from the Persian Gulf through

Baluchistan and southern Afghanistan" in W. G. Mc Ginnics *et el* (Eds.) *Food, Fiber and the Arid Lands* (Tucson) pp. 145-170

Dales, G.F. 1973 "Archaeological and Radiocarbon Chronologies for Protohistoric South Asia" in N. Hammond (Ed.) *South Asian Archaeology*, (London) pp. 157-170

Dales, G.F. 1974 "Excavations at Balakot Pakistan, 1973", *JFA*, Vol. I, Nos. 1-2, pp. 3-22.

Dales, G.F. 1975 "The earliest art of Turkestan, Afghanistan and Pakistan" in *The Art of Early Near East and South Asia*, Propylaen Kunstgeschichte, Vol. 13 (Berlin)

Dales, G.F. 1976 "Shifting Trade Pattern between the Iranian Plateau and the Indus Valley in the third millennium B.C.", *Colloques Internationaux du Centre National de la Research Scientifiic*, No. 567, pp. 67-78

Dani, A.H. 1970 "Excavations in the Gomal Valley", *AP*, Vol. 5, (1970-71) pp. 1-177

Dani, A.H. 1975 "Origins of Bronze Age Cultures in the Indus Basin", *Expedition*, Vol. 17, No. 2, pp. 12-18

Dani A.H. 1978 "Gandhara Grave Culture and the Aryan Problem", *Jr. of the Central Asian Studies*, Vol. I, No. 1, pp. 42-56

De Cardi, B. 1970 "Excavations at Bampur, A Third Millennium Settlement in Persian Baluchistan, 1966", *Anthropological Papers of the American Museum of Natural History*, Vol. 51, pp. 232-355

Deshayes, J. 1969 "Tureng Tepe and the Plain of Gorgan in the Bronze Age", *Archaeology*, Vol. 22, No. 1, pp. 16-17. Also, short notices in *Iran* Vol. VIII, (1970) p. 208; Vol. XI (1973) p. 152; Vol. XII (1974), pp. 224-228

Dupree, L. 1964 "Prehistoric Archaeological Surveys and Excavations in Afghanistan 1959-60 and 1961-63", *Science*, Vol. CXLVI, pp. 638-640

Dupree, L. 1967 'Report on field work in Afghanistan', *The Year Book of the American Philosophical Society*, pp. 504-507

Dupree, L. and Davis, R.S. 1974 "The lithic and Bone Specimen from Aq Kupruk and Darra-i-Kur", *Afghanistan*, Vol. XXVI, No. 4 (1974) I, pp. 52-74: also pt. II, pp. 35-54

Dupree, L., Gouin, Ph., and Omer, N. 1974 "The Khosh Tapa Hoard from North Afghanistan", *Archaeology*, Vol. XXIV, No. (1971) pp. 28-34.

Dupree, L. and Kolb, C.C. 1975 "Ceramics from Aq Kupruk, Darra-i-Kur, and Hazar Gusfand", *Afghanistan*, Vol. 27, No. 4 (1975), pp. 47-69

Enault, J. F. and Jarrige, J. F. 1973 "Chalcolithic Pottery from four sites in the Bolan area of Baluchistan, West Pakistan", in N. Hammond (Ed.) *South Asian Archaeology* (London) pp. 181-196

Fairservis, W.A. Jr. 1971 *The Roots of Ancient India* (London)

*Formozov, A.A. 1966 "Rock engravings in Zaraut Say", *SA* 4

Frumkin, G. 1972 *Archaeology of Soviet Central Asia* (Leiden)

*Ganialin, A.F. 1967 "Altin-Depe, Explorations 1959-61, Seals, etc" *SA* 4

*Ganialin, A.F. 1956 "Namazga-Depe Stratigraphy", *Tr. II AE II*

*Ganialin, A.F. 1959 "Altin Depe along with analogies with Namazga", *Tr. II AE* V

Ghosh, A. 1965 "The Indus Civilization. Its origin, Authors, Extent and Chronology", in Misra and Mate (Eds.) *Indian Prehistory 1964* (Poona) pp. 113-156

Ghosh, A. 1975-76 "At Random" *Puratattva*, No. 8, pp. 123-125

*Ginzburg, V.V. 1959 "Late Bronze Age", *Tr. YUTAKE* IX

Gupta, S.P. "New evidence of the Cultural contacts between India and Soviet Central Asia: 4000 years ago", *Soviet Land*, 16th Aug. 1967

Gupta, S.P. 1968 "Evidence of the Harappa Culture in South Turkmenia, USSR", *Bharati*, Vol. X-XI, pp. 194 ff.

Gupta, S.P. 1968(a) "Stone Age Tools from Loulan in the Tarim basin", *Bharati*, Vol. X-XI, pp. 175-189

Gupta, S.P. 1968(b) "The Relationship between the Chalcolithic Cultures of India and the Chust Culture of the Fergana Valley, USSR", *Puratattva*, No. 1, pp. 1-7

Gupta, S.P. 1968(c) "The Mountainous Neolithic Cultures of Central Asia and Northern India", *The Anthropologist*, Vol. XIV, pp., 125-136

Gupta, S.P. 1969 "Sociology of Pottery", in B.P. Sinha (Ed.) *Potteries in Ancient India* (Patna) pp. 15-27

Gupta, S.P. 1972 *Disposal of the Dead and Physical Types in Ancient India* (Delhi)

Gupta, S.P. 1972 (a) "Dichotomy of Harappan and Pre-Harappan Cultures" in O. Manchanda's *A Study of Harappan Pottery* (Delhi)

Gupta, S.P. 1973 "Introduction to Models and Model Making in Archaeology", in Agrawal, D.P. and Ghosh, A. (Eds.) *Radiocarbon and Indian Archaeology* (Bombay) pp. 359-365

S.P. Gupta 1973a "A Model for understanding the First Urbanization in India", *Puratattva*, No. 6, 42-50

S.P. Gupta 1974 "Two Urbanizations : A Side Study in their Social Structure", *Puratattva*, No. 7, pp. 52-60

Gupta, S.P. 1975-76 "Origin of the Form of Harappa Culture : A New Proposition", *Puratattva*, No. 8, pp. 141-146

S.P. Gupta 1978 "Internal Trade-Pattern of the Harappans" Paper read in a Seminar on Harappa Culture at the *Indian Institute of Advanced Studies*, Simla. A brief note published in *M & E*, Vol. II, p. 122

Hakemi, A. 1972 *Cotalogue del' exposition Lut*, *Shahdad* (Tehran)

Halim, M.A. 1970 "Excavations at Sarai Khola, Pt. I" *PA* No. 7, pp. 23-89

Halim M.A. 1971 Excavations at Saria Khola Pt. II *PA*, No. 8 (1971), pp. 1-112

Hlopina. L.I. 1972 "Southern Turkmenia in the Late Bronze Age", *EW*, Vol. 22, Nos. 3-4, pp. 199-214

Hlopin, I.N. 1974 "Ancient Farmers in the Tedzen Delta", *EW*, Vol. 24, Nos. 1-2, pp. 51-87

Itina, M.A. 1958 'Upper Uzboi Neolithic' *Tr. Kh. E.* II

Itina, M.A. 1959 'Khorezmian Cultures' *Tr. M. Kh. E.* I

Jarrige, J.F. 1976 'Nouvelles Recherches Archaeologiques Au Baluchistan : Les Fouilles de Mehrgarh", *Colloques Internationaux du C.N.R.S.* (Paris) No. 567, pp. 79-94

Jarrige, J.F. and Lachevallier, M. 1977 "Excavations at Mehrgarh, Baluchistan : Their significance in the Prehistorical Context of the Indo-Pakistani-Borderlands", IV *SAA* (Abstracts) pp. 46-48

Khan, F.A. 1965 'Excavations at Kot Diji', *PA*, No. 2, pp. 1-85

Khazanchi, T.N. 1962 'Excavations at Burzahom', *IAR*, 1961-62

Khazanchi, T.N. 1969 'Excavations at Burzahom', *IAR*, 1968-69

*Khlopin, I.N. 1960 'Dashlidji-Depe and the Chalcolithic Farmers of South Turkmenia', *T Yu TAKE*, X

*Khlopin, I.N. 1964 *The Geoksyur Group of Settlements in the Chalcolithic Period* (Moscow)

*Kisselev, S.V. 1965 *Bronze Age in USSR*, MIA 130

Kohl, P.L. 1975 "The Archaeology of Trade", *Dialectic Anthropology*, Vol. I, pp. 43-50

Kohl, P.L. 1977 'The Balance of Trade in Southwest Asia in the Mid-third Millennium', IV *SAA* (Abstracts) pp. 49-62

*Kuftin, B.A. 1956 'Chalcolithic & Bronze Age of South Turkmenia', *Tr. YUTAKE*, VII

Lal, B.B. 1977 "The Indo-Aryan Hypothesis vis-a-vis Indian Archaeology", *Journal of Central Asia*, Vol. I, No. 1 (1978), pp. 21-41

Lamberg-Karlovsky, C.C. 1970 *Excavations at Yahya, Iran, 1967-69*, (Cambridge, Mass.)

Lamberg-Karlovsky, C.C. 1971 "The Proto-Elamite Settlement at Tepe Yahya", *Iran*, Vol. IX, pp. 87-98

Lamberg-Karlovsky, C.C. 1972 'Trade Mechanisms in Indus-Mesopotamian Inter-relations', *Jr. of the American Oriental Society*, Vol. 92, pp. 222-29 Reproduced in *Puratattva*, No. 6 (1976)

Lamberg-Karlovsky, C.C. 1973 "Prehistoric Central Asia", *Antiquity*, Vol. 47, pp. 43-46

Lamberg-Karlovsky, C.C. 1973 "Urban Interaction on the Iranian Plateau : Excavations at Tepe Yahya, 1967-1973", *Proceedings of the British Academy*, London, Vol. LIX, pp. 7-43

Lamberg-Karlovsky, C.C. 1975 "Third millennium Modes of Exchange and Modes of Production", in J.A. Sabloff and C.C. Lamberg-Karlovsky (Eds.) *Ancient Civilization and Trade* (Albuquerque) pp. 341-368

Lamberg-Karlovsky, C.C. and Tosi, M. 1973 "Shahr-i Sokhta and Tepe Yahya: Tracks on the Earliest History of the Iranian Plateau", *EW*, Vol. 23, Nos. 1-2, pp. 21-57

Lyonnet B. 1977 "Decouverte de sites L' Age du Bronze Dans le N.E. de l' Afghanistan : Leurs Rapports Avec La Civilization de L' Indus", *Annali dell' Instituto Orientale de Napoli*, Vol. 37 (NS XXVII), pp. 1-35

Lytsyna, G.N. *et el*, 1965 "Archaeology and Palaeography of Geoksyur Oasis", *SA* 1

Malik, S.C. 1975-1976 Review of H.D. Sankalia's *Prehistory and Protohistory of India and Pakistan*, in *Puratattva* No. 8, pp. 191-93

Markov, G.E. 1966 'Dam Dam Cheshme in 1964, chronology', *SA* 2

Masson, M.E. and Masson, V.M. 1959 *Cahiers d' Histoire Mondiale* I, 1., (UNESCO, Paris)

*Masson, V.M. 1956 'Protohistoric Cultures of YUTAKE', *Tr. YUTAKE*, VII

*Masson, V.M. 1959 *Ancient Village Culture of Margiana*, MIA 73

*Masson, V.M. 1960 'Kara Depe near Artyk', *T Yu TAKE*, X

*Masson, V. M. 1960 'Neolithic and Bronze Age of south Turkmenia', *Tr. YUTAKE*, X

*Masson, V.M. 1962 .'Painted pottery from Djeitun and Kara-Depe', *SA* 3

*Masson, V.M. 1962 *Middle Chalcolithic Sites of South-West Turkmenia*, (Moscow)

*Masson V.M. 1965 "The First Farmers of Central Asia", *Antiquity*, Vol. XLIII

*Masson, V.M. 1962 'South Turkmenia's analogies with Baluchistan, Southern Afghanistan', *SA* 2

*Masson, V.M. 1963 'Middle Asia and Iran in 3rd millennium B.C.', *KS* 93

*Masson, V.M. 1964 *Middle Asia and the Ancient East* (Moscow)

*Masson, V.M. (Ed.) 1964 *Central Asia and Ancient East* (Moscow)

*Masson, V.M. 1964 'Collective graves during the Chalcolithic : Analogies with Baluchistan and Afghanistan', *KS* 101

*Masson, V.M. 1966 *The Land of 1000 Cities* (Moscow)

*Masson, V.M. (Ed.) 1966 *Central Asia, Epoch Stone and Bronze* (Moscow)

Masson, V.M. (Ed.) 1967 *Origin and Development of Agriculture* (Moscow)

*Masson, V.M. 1967 'Proto-urban Culture of Central Asia : Altin-Depe, along with analogies with Indus, Afghan and Mesopotamian sites', *SA* 3

*Masson V.M. 1968 "The Urban Revolution in South Turkmenia". *Antiquity*, Vol. XLII, pp. 178-87

*Masson, V.M. 1974 'Excavations of a Bronze Age Funerary Complex at Altin-Depe', *SA* 4

Masson, V.M. and Sarianidi, I. 1969 "Afghanistan in the Ancient East", *Afghanistan*, Vol. XXII, No. 2, 1969

Masson, V. M. and Sarianidi, I. 1972 *Central Asia, South Turkmenia before the Achaemenids* (London)

*Masson, V.M. 1977 "Proto-Indian Seal Type from Altin-Depe", in *Vestnik Drevni Istorii* (Jr. of Ancient History), pp. 147-155

Meadow, R. 1973 "A chronology for the Indo-Iranian Borderlands and Southern Baluchistan 4000-2000 B.C." in D. P. Agrawal and A. Ghosh (Eds.) *Radiocarbon and Indian Archaeology* (Bombay) pp. 190-204

Misra, V.D. 1977 *Aspects of Archaeology* (Allahabad)

Mughal, M.R. 1972 "Excavation at Jalilpur", *PA*, No. 8, pp. 117-124

Mughal, M.R. 1972 "Explorations in Northern Baluchistan 1972 : New evidence and Fresh Interpretation" in *Proceedings of the Second Annual Symposium on Archaeological Research in Iran* (Iranian Centre for Archaeological Research, Tehran) pp. 276-286

Mughal, RM. 1973 "Present State of Research on the Indus Valley Civilization", Paper Presented to International Symposium on Mohenjodaro, Feb. 1973, Deptt. of Archaeology, Govt. of Pakistan, Karachi. Separate publication.

Mughal, R.M. 1974 "New Evidence of the Early Harappan Culture from Jalilpur, Pakistan", *Archaeology*, Vol. 27, No. 2, pp. 106-113

Mughal, M.R. 1977 "Cultural links between Pakistan and Iran during the Pre-Historic period", *Iran-Pakistan A Common Culture* (Islamabad) pp. 33-82

Mughal, R.M. and Halim, M.A. 1971 "Excavations at Sarai Khola", *Pakistan Archaeology*, No. 8. pp. 34-100

*Okladnikov, A.P. 1953 'Stone Age in Krasnovodsk Peninsula, Djebel, Dam Dam Cheshme, etc.', *Tr. YUTATE* II

*Okladnikov, A.P. 1956 'Djebel Cave finds along with the entire Caspian Stone Age', *Tr. YUTAKE* VII

*Okladnikov, A.P. 1966 'Mesolithic in the Caspian region, Central Asia' *Tr. YUTAKE* II

*Okladnikov, A.P. (Ed.) 1966 *Mesolithic in Asiatic USSR*, MIA 126

*Okladnikov, A.P. and Ranov, V. 1963 *Stone Age ITN*, Vol. I

Piggott, S. 1947 "A new Prehistoric Ceramic from Baluchistan", *Ancient India*, No. 3, pp. 131-142

Piggott, S. 1950 *Prehistoric India* (Penguine Books)

Piperno, M. and Tosi, M. 1971 "The Graveyard of Shahr-i Sokhta, Iran", *Archaeology*, Vol. 28, No. 3, pp. 186-197

Pumpelly, R. 1908 *Exploration in Turkestan : Archaeological Excavations in Anau and Old Merv* (Washington)

Raikes, R.L. 1977 "Prehistoric Iran and Baluchistan : The environmental constraints," IV *SAA* (Abstracts) pp. 66-74

*Ranov, V.A., and Saltovskaya, (Ed.) 1961 'Palaeolithic Caves in Ura-Tyube region, rock engravings,' *Tr.*, XXXI (VII)

Renfrew, C. 1970 "New Configurations in Old World Archaeology,' *World Archaeology*, Vol. 2, pp. 199-211

Ross, E.J. 1949 ' A Chalcolithic site on Northern Baluchistan', *JNES*, Vol. V, pp. 284-317

*Sarianidi, V.I. 1960 'Geoksyur Pottery' *Tr. YUTAKE* X

*Sarianidi, V.I. 1964 'Excavations at Khapuz-Depe,' *KS* 98

*Sarianidi, V.I. 1965 'Geoksyur Necropolis : Collective tombs, comparison with Mundigak' in MIA 130

*Sarianidi, V.I. 1966 'Exploration of Geoksyur Necropolis', *KS* 108

*Sarianidi, V.I. 1967 *Arkh. Otkr.*, (a chapter on Khapuz-Depe and Altin-Depe)

Sarianidi, V. 1971 'North Afghanistan in the Bronze Period', *Afghanistan*, Vol. XXIV, Nos. 2/3, pp. 26-38

Sharma, A.K. 1967 "Neolithic Human Burials from Burzahom, Kashmir," *JOIB*, Vol. XVI, No. 3, pp. 239-242

Sharma, A.K. 1974 'Evidence of Horse from the Harappan settlement at Surkotada", *Puratatta*, No. 7, pp. 75-76,

*Shchetenko, A. Y. 1964 'Painted Pottery at Namazga-Depe', *KS* 98

*Shchetenko, A.Y. 1966 (a) 'Harappan Chronology', *Archaeologia, AN SSR*

Shchetenko, A.Y. 1966 'Post-Harappa Cultures and the Aryans', *Proceedings of VII Congress of Prehistoric Sciences*

Shchetenko A.Y. 1968 'Excavations at Altin-Depe, South Turkmenia', *KS* 114, pp. 39-45

Singh, P. 1974 *Neolithic Cultures of Western Asia* (London)

Stacul, G. 1967 "Excavations in a rock-shelter near Ghaligai (Swat, West Pakistan)" *EW*, Vol. 17(3-4) pp. 185-219

Stacul, G. 1969 "Discovery of Protohistoric Cemeteries in the Chitral Valley (W. Pakistan), *EW*, Vol. 19 (1-2) pp. 92-99

Stacul, G. 1970 "The Gray Pottery in the Swat Valley and the Indo-Iranian Connections (ca. 1500-300 B.C.)" *EW*, Vol. XX (1-2) pp. 92-102

Stacul, G. 1975 "The Fractional Burial Custom in Swat Valley and some Connected Problems", *EW* (NS, Vol. 25, Nos. 3-4) pp. 323-332

Stacul, G. 1977 "Loebanr III ; The Black-Burnished Ware Period in the Swat Valley", IV *SAA* (Abstracts) pp. 93-95

Stacul, G. and Antonini, C.C. 1972 *The Protohistoric Graves of Swat* (*Pak.*), (Rome)

Shaffer, J.G. 1971 "Preliminary Field Report on excavations at Said Qala Tepe", *Afghanistan*, Vol. 25, pp. 89-127

Shaffer, J.G. 1974 "The Prehistory of Baluchistan: Some Interpretative Problems", *Arcatic Anthropology* ; Suppement 11, pp. 224-35

Shaffer, J.G. 1977 *Prehistoric Baluchistan* (New Delhi)

Sharma, G.R. 1978 "Coming of Man to the Valley", A news item in *Statesman* (Delhi), Sept. 1978, p. 7

Sankalia, H.D. 1974 *Prehistory and Protohistory of India and Pakistan* (2nd Edition, Poona)

Thapar, B.K. 1970 "The Aryans : An Appraisal of the Problem" in Lokesh Chandra, S.P. Gupta *et el* (Eds.) *India's Contribution to World Thought and Culture* (Madras), pp. 147-64

Thapar, B.K. 1977 "The Archaeological Remains of the Aryans in North-Western India" (Unpublished, read at Dushambe Conference)

Tucci, G. (Ed.) 1978 *La Citta Bruciata del Deserto Salato* [The Burnt City in the Salt Desert], (Erizzo Editrice, Rome)

Tusa, S. 1977 "Swat Valley (Pakistan) in II and I Millennium B.C. : A Problem of Marginalization", IV *SAA* (Abstracts) pp. 112-113

*Tolstov, S.P. (Ed.) 1960 *The Delta of Amu Darya and Its lands, Sarykamysh, Uzboy*, [The History of its formation]

*Tolstov, S.P. (Ed.) *The Delta of the Amu Darya and its lands, Sarykamysh Uzboi* (Moscow)

*Tolstov, S.P. (Ed.) 1961 *The Burial site of the Bronze Age Kokcha-3* (Moscow)

Tolstov, S.P. *et el* 1967 "Explored finds in Akcha Darya, Kokcha, etc." *Arkh. Otkr.*

Tosi, M. 1968 "Excavations at Shahr-i Shokhta: Preliminary Report on the First Campaign, Oct.-Dec. 1967", *EW*, Vol. 18, Nos. 1-2, pp. 89-127

Tosi, M. 1969, "Preliminary Report on the Second Campaign at Shahr-i Sokhta, Sept.-Dec. 1968", *EW*, Vol. 19, Nos. 3-4, pp. 283-386

Tosi. M. and Wardak, R. 1972 "The Fullol Hoard : A New Find from Bronze Age Afghanistan", *EW* (NS, Vol. 22, Nos. 1-2) pp. 9-17

Tosi, M. 1973 "The Early Urban Revolution and Settlement Pattern on the Indo-Iranian Borderland" in C. Renfew (Ed.) *The Explanation of Culture Change* (London)

Tosi, M. 1973-74 "The North-Eastern Frontier of the ancient Near East", *Mesopotamia*, VIII-IX, pp. 21-76

Tosi, M. 1974 "The Problem of Turquoise in Protohistoric Trade on Iranian Plateau", *Studi di Paletnologia, Peleoantropologia, Paleonotologia e Geologia del Quaternario*, Vol. 2 (NS) pp. 147-162

Tosi, M. 1977 "The Protourban Societies of Eastern Iran and the Indus Civilization", IV *SAA* (Abstracts) pp. 106-109

Trifimova, T.A. & Ginzburg, V.V. 1961 'YUT anthropology of the Chalcolithic period' *Tr. YUTAKE* IX

Ucko, P.J., Tringham, R. (Eds.) 1972 *Man, Settlement and Urbanism* (London)

Vinogradov, A.V. 1957 'Keltminar Culture : its relation with other regions' *SE* 1

Wheeler, R.E.M. 1968 *The Indus Civilization*, (3rd Edition, London)

Zadneprovsky, Y.A. 1962 *Farming Culture of Fergana*, MIA 118

NOTE ; Article and book with a mark of star is in Russian

# *Index*

## A

Achaemenian, 208, 242, 255
Afghanistan, 4, 32, 34, 35, 45, 47, 88, 92, 111, 117-118, 122, 124, 126, 127, 130, 132, 141, 144 ,147, 150, 162, 165, 171, 194, 195, 203, 205, 229, 252-254, 256, 258, 261, 265-267, 270-273, 279, 289-292, 294-295
Africa, 291
Agate, 28, 81, 158, 170
Ai-Khanum, 294, 295
Aina, 82, 85
Ajina Tepe, 75, 76
Akcha Darya, 14-16, 19, 195, 231
Akcha Depe, Akcha, 66, 75-76, 85-86, 187, 195
Ak Depe, 65, 140, 141, 143, 145, 147, 150
Ak Kupruk, 4, 32, 33, 43-45, 252, 265-267, 273
Akmazar, 137, 140, 141
Ak Tanga, 22
Alabaster, 94, 96-97, 112, 117, 119, 143, 253, 276, 295
Al Beruni, 14
Alexander, 248
Ali Abad, 109
Aligrama, 208, 216, 217, 293
Alikosh, 48-49
Ali Tappeh, 46-47
Allchin and Allchin, 247, 252, 280
Altin Depe, 56, 88, 99, 108, 117, 122, 137-146, 148-149, 151-152, 155, 157, 159-160, 163-164, 166-168, 170-171, 175-176, 258-259, 263,275, 276, 283, 294
Al'ubaid, 68
Amirabad culture, 16, 231
Amri, 34-35
Amu Darya, 14, 16-17, 19, 45-46, 172, 185, 188, 193, 194, 195, 209, 231-232
Anatolia, 13
Anau Depe, I, IB, III, 56, 58, 59-61, 62, 64-68, 73, 78, 80-81, 88, 92, 124, 138, 140, 141, 145, 150, 170, 176, 177, 226, 235, 273
Andkhoi, 195
Andronovo, Culture, 16, 183, 184, 186, 188, 190, 205, 229, 284
Antimony, 34, 189, 214
Antonini, 208
Arabian Sea, 258
Aral Sea, 14-17, 205
Arghandab, 122
Arne, 224
Arpa Valley, 189
Arsenic, 253
Artyk, 137, 151
Arvali Depe, 229
Aryan, 122, 164, 185, 200, 206, 230, 240, 242-248, 294, 296
Ashkal Tepe, 232, 233
Ashkhabad, 4, 56 143, 145, 147, 150-151

Asiab, Tepe, 48
Askarov, A. 204
Assyrian, 203
Asthana, S. 163, 171, 228, 252, 263, 295
Atharvaveda, 243
Atrek river, 117, 224
Attock. 26
Auchin Depe, 180-181, 203
Avesta, 230, 246

**B**

Baba Darwesh, 44, 267
Bactria, Bactrian, 194, 205, 206, 219, 230, 284
Badakshan, 117, 143, 278, 295
Bahal, II, 239
Bairam Ali, 227
Balakot, 283-284
Balambat, 208, 214-215
Balkh, river, 32
Balkhan, 18-19, 46, 185
Baluchistan, 26, 31-32,34, 36, 80, 88, 90, 117, 124, 127, 130, 141, 146, 150, 160, 165, 171, 200, 229, 252-256, 258, 261, 263-265, 267, 270-275, 277-280, 290
Bampur, 170, 280-281
Banganga, 26
Barikot, 217
Baroh, 26
Bead, 9, 11, 18, 25, 31, 34, 71, 81, 96, 99, 113, 119, 141, 158, 159, 170, 172, 180, 183, 187, 188, 189, 191, 201, 214, 234, 235, 268, 278, Carnelian beads, 40, 170, 203
Behrain, 283
Belan, 272, 292
Belt Cave, 5, 46-47
Berdyiev, O.K. 11, 59
Bernhard, 216, 247
Bernshtam 189
Beurme 65, 223
Biscione, R. 122, 126
Bishkent Culture, 188; 191-194, 205
Boghaz kuie, 246
Bokhara, 19, 174
Bolan, 26, 252, 267-268
Bolan Pass, 26, 31, 32, 128, 260, 294-295
Bone, tools, objects. 6, 9-10, 11, 13, 16, 18, 22,25-26 30-31, 33,-36, 38, 41-42, 44, 50, 51, 71, 73, 76, 81, 87, 95, 99, 113-114, 183, 184, 186, 203, 211, 233, 234, 245, 266
Braidwood, 3, 5, 31-32, 52, 252, 270, 289
Buddha, 248
Buddhist, 206, 219
Bugurluk culture, 204
Bukhara, 143
Bujnurd, 52
Buner, 208
Burial, 18, 40-44, 80-81, 93, 108-109, 115, 148, 150, 158, 168, 180, 185-186, 188-189, 193, 199, 205, 208, 210, 215, 232, 238, 242, 244, 267
Burney, M. 47
Burzahom, 4, 26-27, 34, 36-37, 206, 216-217, 267, 293
Bus Mordeh, 47
Butkara II, 208, 211

**C**

Caldwell, J, 252
Compagnoni, B. 217
Carmel mt. 291
Carnelian, 40, 71, 81, 119, 143, 158, 170, 203
Casal, 110, 112, 124, 127, 252, 272
Caspian, 4, 9, 18, 47, 52, Mesolithic, 46, 49, 51; Neolithic, 17, 19, 46; Sea, 14, 15, 17, 223, 248, 284, 291
Catal Huyuk, 13, 68
Caucasia, 50, 291
Cayonu, 267, 270
Chaacha Sai, 56
Chacha river, 137-141
Chagalli Depe, 5, 6, 11, 13. 58, 61, 73

Chagnak, 18
Chakdara, 208
Chakmakli Depe, 58, 59, 62, 63, 73
Chakrabarty, Dilip, 171, 277, 285
Chalcedony, 30
Charsada, 211, 219. 242, 248
Chasma Ali, 65, 112, 271
Chenab, 116
Chhabra, 247
Chialyk-Depe, 224
Childe, G. 3, 55, 135, 251, 271
China, 34, 36, 136, 217-218, 238, 293
Chitral, 206
Chlorite, 119, 280, 295
Chong Tepe, 76, 86, 85, 97-99
Chopan Depe, 5, 6, 9. 10
Chopani Mando, 272
Chust Culture, 232-240, 275
Clarke, D.L. 280-281
Copper, objects, 11, 21, 36, 44, 52, 55, 58-59, 61, 63-64, 67, 71, 73, 81, 95-96, 97, 99, 116, 146, 148, 160, 162, 167, 168, 172, 182, 191, 194, 196, 201, 208, 210, 212, 214, 217, 231, 243, 247, 253, 267, 273, 294
Costantini, L. 217

## D

Dabarkot, 200, 260
Dahistan, 205, 223-226, 230, 284
Daina, 161, 172
Dales, G.F. 254, 257, 258, 261, 264, 273-277, 283
Dalverzin Tepe, 232, 233, 235, 239, 275
Damb Sadaat, II-III, 90, 113, 122, 124, 126, 279, 280-281, 293
Dam-Dam-Chesma, 46
Damghan, 256
Dani, A.H. 30, 128, 206, 208, 210-211, 216-218, 240, 242, 244, 245, 247, 252, 277, 294
Darbaz-kir, 19
Darius I, 177
Darra-i-kur, 33, 44-45, 267
Dashly culture & sites, 65, 151, 194-200, 201, 203, 205, 206, 219, 296
Dashlidji Depe, 66-67, 75-76, 86, 273
Dasht Valley, 256
Davis, R.S. 33, 44
Dawaltabad, 195
Dead Sea, 6
Deh Luran Plain 48-49
Deh Morasi Ghundai, 162, 271
Dehra Gopipur, 26-27
Desht zones, 66
Dharmashala, 27
Dibber, 26
Dilmun, 171
Dir, 219
Diyala valley 109
Djanak, 18
Djanbas Kala, 4, 14, 17, 19, 21
Djebel Cave, 14, 18-19. 46
Djeitun Depe, 5, 6, 10, 11, 12, 13, 46, 290
Djeitun Culture, 2, 4-6, 8-10, 11, 14, 19, 25, 35, 45, 46, 48, 49, 50, 51, 52, 56-59, 61-64, 68-69, 75, 94, 96, 116, 141, 225, 270, 273, 293
Djovi, 80
Dupree, L. 32, 33, 43-44, 92, 252, 265-267
Dushak, 56
Dwelling pits, 37
Dyson, R.H., 62

## E

Egypt, 56, 136, 238, 289
Ekin Depe, 65, 151
Elam, 117
Elburz, 14, 48-49, 120
Elen Depe, 78
Elken Depe, 176, 180, 183, 226-227
Enault, J.F. 128
Eran, 239
Ermolova, 149
Euphrates, 160, 289

F

Fairservis, W.A. 32, 46, 115, 124, 127, 252, 271, 272
Fars, 256
Fergana Valley, 143, 172, 174, 185, 188-190, 194, 232, 238-240, 275, 293
Fullol Hoard, 92, 295
Fortification, 84, 143, 228, 232, 243, 284

G

Gamburg, 189
Gandhara Grava, 200, 205-206, 208, 217-218, 211, 240, 242-245, 247, 277
Ganga Valley, Ganga Basin, 240, 242, 246, 248, 272
Ganialin A.F., 176
Ganjalin, 177, 180, 223
Ganj Dareh Tepe, 48
Gaura IX 90
Gawra Tepe, 109
Gelb, 238
Geoksyur Oasis, 17, 50, 56, 66, 67, 73, 75, 76, 81, 82, 84, 85-87, 90, 93, 96, 97, 99, 105, 107, 108, 109, 110, 122, 126, 129, 130, 140-141, 144, 145-146, 148-149, 150-159, 176, 229, 231, 252, 273, 280, 281, 295
Geok Tepe, 180
Ghaggar, 206, 247
Ghaligai, 200, 206, 208, 216-217, 247-248
Ghar-i-Asp, 47, 266
Ghar-i-Kamarband, 46
Ghar-i-mar, 266-267
Gharpat, 208
Ghosh, A. 276
Gilund, 247
Gissar Culture, 4, 14, 21, 24-25, 29, 45, 293
Giyan, 93, 224
Gobi desert, 149
Gomal Valley, 26, 30, 229, 252, 260, 269, 274, 279, 293
Gorbunora, 189
Gordon, D.H. 280
Gorgan Valley, 6, 14, 49, 51-52, 62, 94, 117, 225-226
Granary, 8-9, 117
Grey Ware, 19, 36, 38, 78-79, 124, 171, 180-181, 200, 212, 227-228, 235, 241, 248, 296
  Burnished Grey Ware, 38, 141, 145, 211, 216, 224, 225, 226, 229
  Gandhara Grey Ware, 240, 241, 248
  Incised Grey Ware, 150, 204-205
  Painted Grey Ware, 206, 217-218, 225, 240-242, 245, 247-248, 284
  Plain Grey Ware, 206, 217-218, 240, 244
Guler region, 26
Gulf, 255
Guliana, 172, 191
Gumla, 26, 30, 128-129, 146, 170, 229, 252, 256, 259, 260, 263, 269, 273-275, 280, 281, 293
Gupta, S.P. 22, 136, 206, 228, 244, 258, 261, 272, 275
Guran, Tepe, 6
Gurdi, 128

H

Halim, M.A. 129
Hapuz Depe, 99
Harappa, 33, 146, 158, 167-170, 247, 269, 280, 295, Harappan—9, 35, 61, 63, 117, 122, 146, 149, 151, 157, 160-161, 162, 164, 166, 167, 169, 170, 175, 181, 183, 239, 245, 246, 252, 255, 256, 258, 260-261, 263-264, 275, 276, 278, 281-284, 294-295, Early Harappan 280; Pre-Harappan, 26, 58, 61, 63, 118. 146, 260, 264; Late Harappan, 116, 120, Post-Harappan 182, 236, 243
Harirud, 66, 122
Harwan, 38
Hassuna (IV-V) 61-62
Hastinapur, 225

Hathala, 146
Hazar Gusfand, 33
Helmand Valley, 118, 122, 126, 229, 255-256, 265, 279, 281-282, 295
Herat, 112, 122, 254, 294
Himalayas, 292-293
Hindukush, 203, 252, 255, 266, 295
Hissar and Hissar culture (Ic-IIa, III) 22, 25-26, 29, 32, 93, 96, 112, 113, 124, 141, 144, 171, 174-175, 183-184, 201, 203
Holdich, 252, 224, 251-252, 254, 271-272, 276, 279
Horse Cave, 266
Hotu Cave, 47-48
Hyrcanian, 177

I

Ilginli Depe, 88, 141
Indo-Aryan, 120
Indo-European, 187, 246, 284, 294
Indo-Gangetic Divide 247, 264, 284, 292
Indo-Iranian, 185
Indus, Indus Valley, 30, 116, 117, 138, 141, 147, 151, 155, 159, 160, 162, 165, 167, 168, 170, 171, 175, 183, 209, 218, 228, 248, 252, 254-258, 261, 263-264, 270, 274, 275, 776-277, 279 292-295
  Indus Culture 118, 165, 169, 260, 263
  Indus Script 256
Iran, 4, 6, 14, 35, 50. 47, 51-52, 61,65, 68, 76, 80, 90, 93, 94, 95-96, 99, 105, 110, 112-113, 116-117, 120, 129-130, 140, 141, 144-145, 147-148, 150, 162, 125, 170-171, 175, 184, 200, 203, 219, 223, 237-239, 244, 246, 247, 252-254, 556, 261, 271-272, 273, 278-280, 281, 289, 295
Iranian, 19, 46, 52, 61, 63, 105, 109, 110, 117, 120, 127, 130, 151, 205, 224-225, 230, 248, 252, 256, 261, 270, 271, Plateau-51, 217, 252, 256
Iraq 6, 12, 47, 50,52, 105, 237, 289
Iraqo-Iranian, 14, 48, 109
Iraqi Khurdistan, 6
Ismailabad 65
Itina, M.A. 185, 231
Ivory, 163, 165-167, 171, 212, 214, 294
Izat Kuli, 224, 225, 227

J

Jalilpur, 4, 16, 33-35, 129, 146, 259, 263, 269, 270, 273-274, 277, 280-282, 293
Jarmo, 5, 6, 14, 32, 46, 48-49, 251, 290
Jarrige, J.F. 31, 122, 128, 252, 265
Jasper, 28, 30,44
Jemdet Nasr, 93, 126, 256
Jeriho, 6 14, 251, 289-290
Jhang, 269
Jhelum, 45
Jhukar, 183-184
Jordon, 6, 289
Joshi, J.P. 116

K

Kacchi Plains, 128, 274
Kachuris, 176, 226
Kafirnigan river, 191
Kailiu Cave 18
Kairak-Kum, 188, 189, 190-191, 204, 233
Kalar Dasht, 224
Kalibangan, 61, 63, 245, 259
Kandahar, 111, 162, 271, 293-295
Kangourt, 205
Kangra Valley, 4, 26, 29, 30, 293
Karabkova, 22, 25
Kara Bogaz, 18
Kara Bura, 292
Kara Darya, 232
Kara Depe, 56, 65, 67-68, 71, 73, 75-76, 78, 79, 80, 81, 82, 87-88, 92-96, 109, 124, 126-127, 273-274, 278
Kara Kum, 5, 14, 19, 56, 190, 290
Karankly-Tokaj, 66
Karantki, 65

Karatau I, 190
Karaul, 66
Karim Shahir, 25
Kashan Oasis, 52, 61, 253
Kashmir (Valley), 4, 26, 29-30, 34, 36, 44-45, 206, 218, 289, 293
Katelai, 208, 244
Kavir Lut, 120
Kazakhstan, 16, 19, 184-185, 188, 238, 284, 291
Kechi Beg, 112, 126
Keltminar, 4, 15, 16, 17, 19-21, 45-46, 238-239, 293
Kemmerih, 253
Kenyon, M. 289
Kerman, 252, 256, 267, 280, 282
Kermanshah, 48-49, 51
Khaaka, 174
Khapuz Depe, 99, 108, 131, 138, 140, 141, 143, 144-146, 148, 150, 151, 159
Khatyb 1-17
Khazanchi, T.N. 36-38
Khlopin, or Hlopin and Hlopina 6, 7, 84, 105, 108, 122, 130, 131, 138, 175, 178, 180
Khodja Su, 18
Khorasan, 49, 71, 123, 126, 241, 248, 254, 294
Khorezm, 14-17, 45, 188, 199, 205, 231, 239, 205, 293
Khuzistan, 256
Khurin, 234
Khyber Pass 294
Kile Gul Mohammad, 26, 30, 31-32, 35, 112, 126, 267-270, 272, 273, 279
Kirgizia, 185, 188-189, 193
Kirta, 128
Kish, 251
Kishk-i-Nakhod-111
Kizil Arvat, 26, 185, 223
Koldhihwa, 272
Koi Krylgan Kala, 199
Kokcha, 185-187
Kolb, 43
Komarov, 56
Korobkova, 9
Kopet Dag, 5, 14, 45, 46, 56, 61-62, 63, 65, 66, 87-88, 94-95, 107, 118, 120, 123, 138, 160, 161, 177, 181, 223-224, 226, 256, 258-259, 273, 290
Kosh Depe, 137, 140
Kot Diji, 63, 118, 128, 275
Koushut, 56, 59, 62
Kozhemioko 189,
Krasnovodsk, 14, 19, 46
Krishnaswami, V.D. 26
Kuchuk Tepe, 229
Kudaro, 290
Kuftin, B.A. 178
Kui Bulion, 22, 25
Kukhna Bai, 22, 24
Kukkeli, 246
Kulli, 204, 283,
Kunyak, 16
Kurrum, 160
Kyzyl Kum, 16, 19, 143, 172, 191

L

Lal, B.B., 26, 160, 218, 240, 246-247, 294
Lalbatai, 208
Lamberg-Karlovsky, 31, 46, 61, 90, 130, 162, 251, 252, 256-257, 261-264, 277, 280, 294-295
Lapis lazuli-118-119, 143-144, 158, 170, 203, 253, 256, 258, 276, 278
Lechevallier, M. 265
Litvinsky, 153
Lloyd, 70
Loebnar (I, III) 208, 211, 216-217, 243
Loralai, 30, 269, 270
Lothal 174-175, 245
Lou Lan 293
Lyonnet, B. 283, 294
Lytsyna, G.N. 109, 149, 141

M

Madu Depe 224-225

Mahabharat 240, 247
Maimana, 195
Makan, 171
Makran, 255-256
Malhotra, K.C. 277
Malwa, 200
Malyan, 256
Manda, 116
Mandel' Shtam 180, 185
Margiana, 227-228
Marushchenko, 4, 177, 226
Masson, V.M. 5, 6, 12, 14, 19, 25, 46, 48, 51-52, 58, 61-65, 68, 69, 70, 73, 76, 80, 87, 90, 93-94, 99, 105, 109, 110, 122, 124, 129, 136, 138, 144, 151, 152, 155, 161, 162, 171, 184, 188, 191, 193, 194 223, 224, 226, 229-230, 254, 274, 283, 290, 293, 294
Masuda, 50
Mate, 292
Mc Cown, 65, 80
Meana-Cha Cha, 141
Meana-Sai, 56
Megalithic, 36, 38, 41-42
Mehrgarh, 4, 26, 30-31, 32, 35, 36, 128, 252, 261, 263, 265, 267, 268, 269, 270-273-276
Mellart, 3, 46, 47, 49, 51-52, 62, 68
Meluha, 171
Menhirs, 36
Meshed, 52, 62, 177
Meso-America, 135, 252
Mesolithic, 4, 9, 14-15, 22, 24, 25, 26, 28, 29, 32, 33, 37, 46-48, 51, 52, 210, 265-266, 268, 269, 270, 272, 292
Mesopotamia, Mesopotamian 62, 68, 92-93, 88, 109, 110, 117, 118, 126, 129, 142, 144, 151, 155, 156, 157, 168, 170, 171, 252, 253, 256-257, 276, 278, 281, 283, 295
Microliths, 6, 9, 10, 17, 22, 24, 25, 29-30-31, 34, 46, 50-51, 268-269
Mirrors (Copper) 116, 160, 161, 193, 199, 201, 234,
Misra, V.N. 272, 292
Misrian Plain, 177, 223, 225-226, 227
Mitathal, 264
Mohapatra, G.C. 26, 27
Mohenjodaro 26, 116, 146, 158, 161, 167, 168, 172, 174, 175, 183, 263, 275,
Mondjukly, Mondjukly-Depe, Mondjukli, 6, 58-59, 61, 62, 63, 64, 73, 141
Mongoloid, 216
Mother-Godddess, 50, 71, 86, 95, 116, 146, 164, 183,
Moustafi, 48
Mughal, R.M. 34, 35, 129, 248, 274, 276, 279
Mullali Tepe, 76, 82, 84, 97,
Multan, 26, 33, 269
Mundigak, 35, 36, 110, 111, 115, 116, 117, 118, 122, 124, 126, 127, 130, 147, 150, 160, 169, 170, 174, 2 2, 252, 259, 261, 263, 271, 279, 273, 274, 275, 276, 280, 81, 293
Muninabad Cemetery, 185
Murgab Delta, 45, 176, 177, 180, 183, 184, 205, 232, 230, 235, 247, 279, 284, 294, 295

N

Nagda II, 239
Nal, 255, 271
Namazga, 35, 58, 61, 118, 138, 167-171, 184, 206, 256-257, 259, 261, 263, 271, 273-276, 279-280, 293-295
Namazga Depe, 56, 73, 80, 88, 117, 122, 140, 141, 145-148, 152-153, 155, 157, 159, 163, 176-178, 183, 226
Namazga I, 58, 64-68, 72-73, 75-76, 80, 105-106, 110
Namazga II, 35, 58, 71, 77-79, 80-82, 86, 93, 99, 124, 155
Namazga III 90, 92, 94, 96, 105, 107-109, 113, 116, 126-130, 132, 145, 149, 229, 278-280
Namazga IV 58, 90, 139-141, 143-144, 150-151, 156, 175, 200

Namazga V 58, 160, 162, 164, 171-172, 175, 180, 230
Namazga VI 58, 177, 204, 227, 239, 284
Navdatoli 200, 238
Neanderthal, 291
Necropolis, 16
Negahban, 48
Neolithic, 3-4, 12, 14, 17-18, 22, 28, 37, 41-44, 46-48, 52, 55, 76, 141, 149, 225-226, 238, 251-253, 265-268, 270
Nile, 160
Nishapur, 52, 62
Novaya Nisa, 6, 10
Nurek, 205

**O**

Obsidian, 44, 50, 290
Okladnikov, A.P. 25, 291
Oldowan, 291
Ovadan, 65
Oxus, 169-170, 203, 258, 265-266, 277, 283-284, 294-296
Oyukli 18-92

**P**

Palaeolithic, 29, 265-266, 272, 292 Lower 28; Middle 28, Upper 33
Palestine, 151
Panjkora, 208
Parthia, Parthian, 117, 227, 230, 284
Pendjikent, 172
Periano Ghundai, 280
Persian Gulf, 238, 256-258, 283
Peshawar, 206, 209, 219
Pessedjik Depe, 6, 10, 69
Piankova, L.T. 205
Piggott, S. 80, 88, 113, 124, 175, 251
Pin, copper-bronze (spiral) 109, 116, 148, 161-162, 172, 174, 187, 199, 201, 203, 217
Possehl, G.L. 120
Prakash II, 239
Proto-Australoid 216
Proto-Elamite, 164, 255, 261, 274
Proto-Europoid 216
Pulanr, 208
Pumpelly, 56, 64, 66, 78, 167, 177, 226, 229
Punjab, 4, 26-27, 217. 240-242, 247
Pusalkar, 246

**Q**

Qazvin, 48
Quartzite, 28-29, 44
Quetta, Quetta Valley, 4, 30-32, 112, 113, 117, 122, 126, 127, 128, 229, 252, 260, 271-272, 279, 280-280-282, 293, 295
Quetta ware 122, 124

**R**

Rana Ghundai, 30, 245, 252; 268, 270, 273
Ranov, V.A. 22, 25, 292
Rao, S.R. 174
Ravi river, 129, 279, 282, 293
Renigunta, 292
Rigveda, 242-243, 245
Roman, 9
Ror, 4, 26, 27, 30, 293
Ross, 30, 245, 252
Rud-i-Biyaban, 120, 144

**S**

Sabz, Tepe, 48
Sabzvar, 52
Sai, 272
Saidichi, 162
Said Kala Tepe, 127, 271
Sakarravaks, 231
Sakas, 231
Samarkand, 172
Samarran, 99

Sanghao, 292
Sang-i-Chakmak, 49-50, 52, 62
Sankalia, 238, 252, 292
Sapalli Tepe, 201, 203-206, 284, 266
Sarab, Tepe, 6, 48-49
Sarai Khola, 4, 26, 33-35, 128, 259, 269-270, 073
Sarai Nahar Rai, 272
Ssrason, Tepe 204
Saraswati river, 248
Sarianidi, 5, 12-14, 19, 25, 46, 49, 51-52, 61-62, 64-65, 68, 70, 73, 76, 80, 87, 90, 93, 94, 99, 105, 109, 110, 129, 131, 136, 138, 144, 145, 146, 153, 159, 161-162, 171, 184, 188, 193-195, 200, 203-223-227, 229-230 254, 276
Sarmancha Depe, 66, 73
Sarykamysh Delta, 16-17
Satpatha Brahmana, 244
Schmidt, 56, 80, 229
Scythian, 231
Seal, 47, 95, 113-116, 118-119, 115, 127, 139, 147, 150, 158-163, 168-171, 180, 184,
203, 257-258, 274, 278, 280, 294
  Harappan seal, 170, 257, 275, 283
  Mesopotamian Seals, 109, 162
  Persian Gulf Seals, 257
  Proto-Elamite Seals, 118
Sea-shell, 9, 16, 18, 119
Seiichi Masuda, 49
Semenov, 9
Serpentine, 25
Shadipur, 26
Shaffer, J. 88, 90, 276-277
Shahdad, 170, 280-282
Shahr-i Sokhta, 35, 90, 110, 113, 117, 119-122, 124, 126, 127, 130, 139, 144, 150, 162, 175, 218, 229, 252, 255-257, 259, 261, 263-264, 271, 273-276, 279-281, 284, 293-295
Shahrud, 49
Shah Tepe, 145, 150, 201, 205, 224-225, 247-248, 254
Shalozan, 160
Shanidar, 47-48
Sharma, A.K. 40, 246-272
Shchetenko, 138, 159, 165, 169, 274, 293
Shor Depe, 137, 140, 159
Shoturgai, 169-170, 258, 260, 283-284, 294-295
Shrine, 68, 86, 153, 277
Sialk, 6, 14, 35, 46, 48-49, 51-52, 61-63, 65, 93, 124, 183, 224, 235, 239, 251-254, 271, 279
Siberia, 45
Siestan, 110, 117, 121-122, 124, 126, 127, 130-132, 141, 162, 165, 171, 218, 229, 252, 254, 256, 258, 270, 273-274, 277-279, 281, 293, 295
Singh, P. 3, 244
Sinkiang, 24, 289
Sirsa Valley, 27
Siswal, 264
Sivaramamurti, 243
Snake Cave, 266
Sogalai, 208
Sogdiana, 204
Sohan, Soan, 26-27, 291
Sothi Culture, 61, 63, 118, 264, 274
Spindle whorls, 10, 44, 58-59, 61, 71, 76, 99, 113, 203, 233, 235,
Stacul, G. 208, 210-211, 214, 216-217, 244, 247
Steatite, 44, 183, 253
Stein, A. 218
Steppe Culture, 184, 188, 229
Stronach, D. 49, 51
Sumbar, 223
Sumer, Sumerian, 56, 164
Suraj Bhan, 264
Surkotda, 245
Susa, 109, 117, 251
Susiana, 76, 109
Sutkangendor, 260, 283
Suyargan Culture, 16
Swastika, 180, 193

Swat Valley, (Culture) 200, 205-206, 208, 211, 216-218, 230, 240, 242, 243, 247-248, 284, 293-295
Syr Darya, 46, 172, 190, 231-233, 235
Syria, 151

T

Taichanak Depe, 137, 140, 159
Tadjikistan, 14, 21, 27, 29, 30, 45, 188, 191, 194, 204. 205, 289-290, 292-293, 295
Tagisken Cemetery, 231
Tahirbai Depe, 181, 203, 247-280
Tal-i-Bakun, 99, 129, 251, 271
Tal-i-Iblis, 80, 252, 256, 267, 273
Tandir-yil, 205
Tangsikildja. 224
Tarike, 208
Tashik-Tash, 291
Tashkent, 204
Tashkent Oasis, 188
Taxila, 26, 33, 128, 219, 242
Tazabag'yab Culture, 15-17, 185, 188, 204-205
Tedjen, 5, 45, 56, 66, 73, 75, 76, 108, 109, 110, 122, 130-131. 137-138. 140-141, 143, 159, 176-177, 183, 229, 256, 275, 278, 279, 294-295
Tekken Depe, 176-177, 180
Tell-Es-Sawoan, 5, 48
Tell uqair, 98, 70
Temple, 115
Termez, 203, 229
Thana, 208, 212
Thapar, B.K. 247, 294
Tien-Shan, 188, 189
Tigris, 48, 160, 289
Tilkin Depe, 65
Timargarha, 208, 212, 214, 216
Timber Grave Culture, 184, 185, 188
Tin, 143, 174, 253, 258
Togau, 35, 269-270
Toglok Depe, 6
Tokai, 65
Tolstov, S.P. 15-16, 21, 185, 188, 190, 231
Tosi, M. 5, 46, 48-49, 51-52, 64, 69, 90, 92, 110, 117, 120, 122, 124 ,126, 130, 138, 141, 144, 150, 162, 224-225-226, 252, 254-255, 261, 263, 274-275, 279-280, 294-295
Toursum Sada, 205
Tringham, R. 3, 135
Tucci, 124, 206
Tulkhar Cemetry, 191, 205, 296
Turan, 255
Tureng Tepe, 14, 48-49, 52, 145-147, 152, 201, 224, 248
Turkey, 151, 267
Turquoise, 9, 52, 71, 118-119, 143, 180, 253, 258
Turtkul, 16
Tusa, 217, 219
Tut-Kaul, 22, 25-26, 29
Tuzkhan sites, 19

U

Ubaidian, 129
Ucko, P.J. 3, 135
Ulug Depe, 88, 99, 137, 140-145, 147, 149, 151, 159, 227
Ur, 144, 251, 261
Ural, Uralian, 184, 188
Uruk IV, 90
Uzbekistan, 19, 45, 172, 194, 203, 205, 236, 284. 289, 293, 295
Uzboi, 4, 15, 16, 17, 19, 45-46

V

Vaksha, 22, 191, 205
Vedic, 135, 230, 242-246
Veddid, 216
Vindhyan, 272
Vinogradov, A.V. 204
Volga. 184-185, 188, 194
Vuadil, 189, 233

**W**

Wardak, R. 92
Waziristan, 256
Wheeler, R.E.M. 109, 161, 169, 211, 252, **281**
Wulsin, 224

**Y**

Yahya, Tepe, 90, 130, 144, 150, 252, 256, 257, 259, 221, 263, 273, 280, 281, 295
Yakke, Parsan, 231
Yalangach Depe and Culture, 66, 75-76, 82, 84, 86, 88, 99, 106-107, 109, 141
Yangi-kala, 177, 180
Yang Shao, 34, 235
Yarim Tepe, 6, 14, 46, 48, 49, 51-52, 94, 205
Yassi Depe, 66, 68-69, 73, 273
Yaz Depe, 175, 227, 229, 248, 296
Yaz I, 205-206, 228-229, 235, 239, 275, 284
Yenisei, 184

**Z**

Zadneprovsky, Y.A. 232, 235, 237, 239, 240, 294
Zageh Tepe, 48
Zagros, 3-4, 6, 14, 25, 47-49, 224, 252, 265, 270, 289
Zaman Baba Culture, 171-172, 191
Zaravshan, 19, 21, 172, 185, 191, 194
Zarzian Culture, 47
Zawi Chemidar, 25, 47
Zhob, 116, 146, 265, 280, 295
Ziarat, 208
Ziggurat, 117, 155-157, 164, 263

# *LIST OF PLATES*

I Pot-sherds list of from Djeitun Neolithic. Handmade thick red ware with paintings in ocherous red.
II A Neolithic pit-dwelling at Burzahom, Kashmir Valley.
III Neolithic tools from Burzahom, Kashmir Valley.
IV A human burial at Neolithic Burzahom, Kashmir Valley.
V An animal burial (wolf) at Neolithic Burzahom, Kashmir Valley.
VI Chalcolithic painted pottery; Namazga II culture.
VII Excavated remains at Kara-Depe; Namazga II.
VIII Different pot-forms; Namazga V Culture (Middle or Mature Bronze Age)
IX Plan and elevation of the Namazga V Ziggurat at Altin-Depe (Reconstructed)
X Some mud-brick walls in the excavations at Altin-Depe, Namazga V.
XI A flat spear-head of bronze from Altin-Depe; Namazga V.
XII A bronze axe-adze from Mohenjodaro; Mature Bronze Age (late phase)
XIII—XIV Two views of the Terracotta mother-goddess from Altin-Depe; Namazga V.
XV Black-on-red Ware sherds from Dalverzin Tepe, Chust Culture; Early Iron Age.
XVI Gold bull-head from Altin-Depe; Namazga V.
XVII Gold animal-head from Altin-Depe; Namazga V.
XVIII Explorations in Dahistan for Late Bronze Age sites; at Kaptchigai.
XIX General view of the Neolithic site at Ror, Kangra Valley (Himachal Pradesh)
XX Polished stone-axes from Ror, Kangra Valley.
XXI Flake and pebble tools from Ror, Kangra Valley; possibly Neolithic associated.
XXII Different types of Gandhara graves; Late Bronze Age-Early Iron Age. 1. Deep double-pit burial; 2. Jar burial in a pit lined with dry-stone Walling; 3. Rough-stone cist burial for children; 4. Stone-slab cist burial; 5. Double burial.

XXIII Chalcolithic Painted pottery : 1-13 from Chong-Depe; 14-35 Geoksyur-1

XXIV Chalcolithic terracotta figurines : 1, 2, 4, 5, 7, 8-14 from Geoksyur; others from Chong-Depe.

XXV Single grave in a structural vault at Geoksyur-1; Namazga II-III.

XXVI Single burial in a mud-brick chamber at Kara-Depe; Namazga III.

XXVII Three flexed burials in a Collective grave at Geoksyur.

XXVIII A terracotta female figurine from Kara-Depe; Namazga III.

XXIX Terracotta bird-like female figurine from Altin-Depe ; Namazga V

XXX Fragments of terracotta toilet-boxes with cut-out decorative pattern Namazga IV-V.

XXXI A clay bull figurine from Altin-Depe; Namazga V.

XXXII Seals and beads from Middle Bronze Age; Namazga V

XXXIII Copper seals from Namazga V.

XXXIV A terracotta camel-driven cart from Altin-Depe; Namazga IV.

XXXV A hoard of bone, copper, faience, stone and terracotta objects from Altin-Depe; Namazga V.

XXXVI A spouted vessel from Tahirbai-3; Late Bronze Age (Namazga VI).

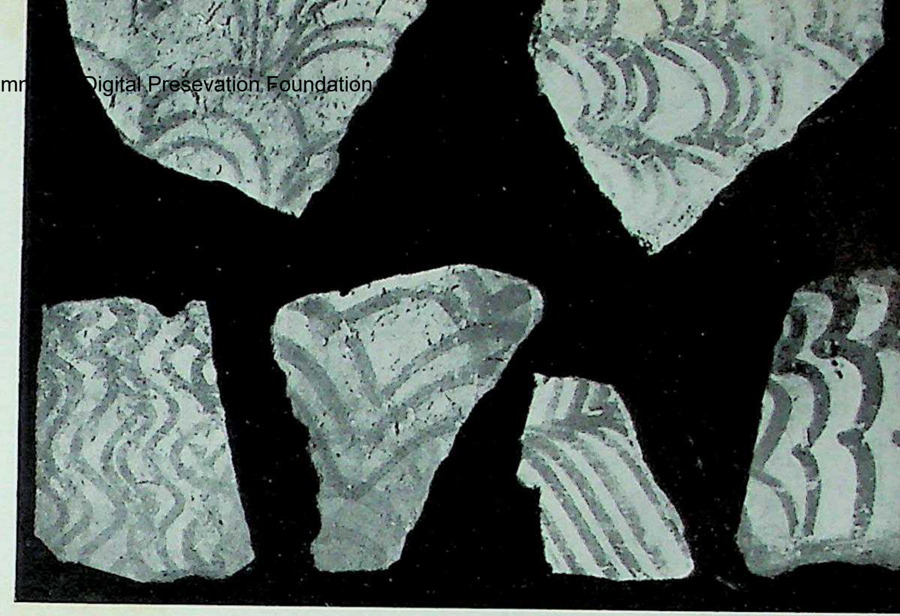
XXXVII Dish-on-stand from Tahirbai Depe-3, Late Bronze Age (Namazga VI).

XXXVIII Excavations at Namazga-Depe; Namazga VI remains.

XXXIX Lithic blades from the Neolithic Complex of Chinese Central Asia (Sinkiang).

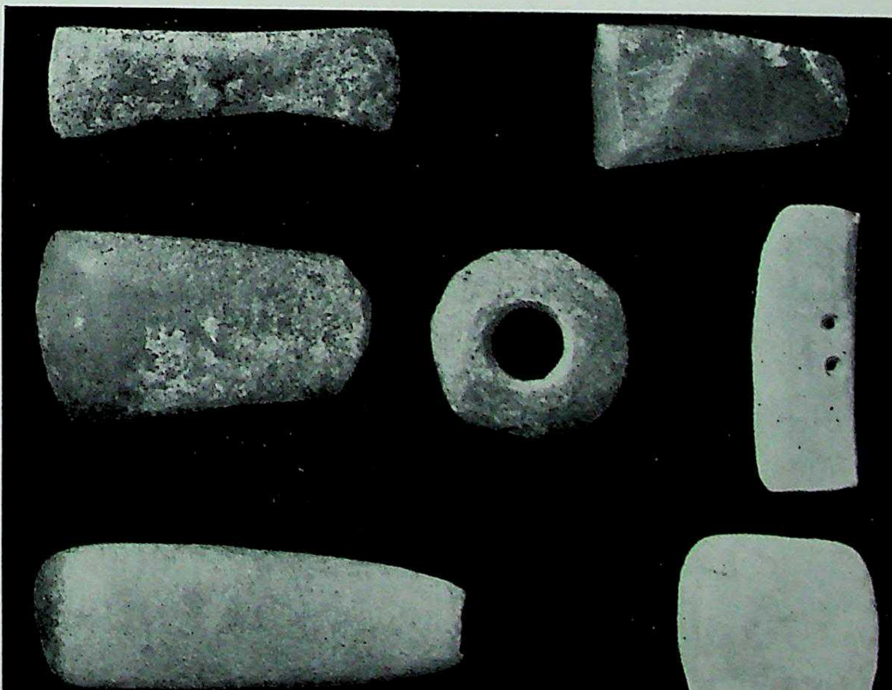
XL Polished stone-axes from Sinkiang, Chinese Central Asia.

CC-0. Agamn Digital Presevation Foundation

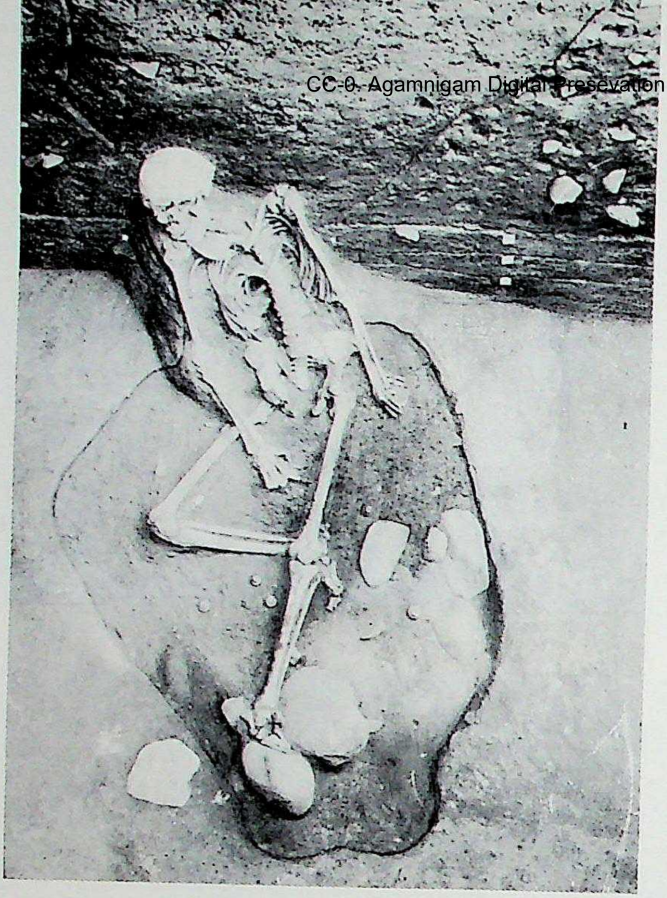


I

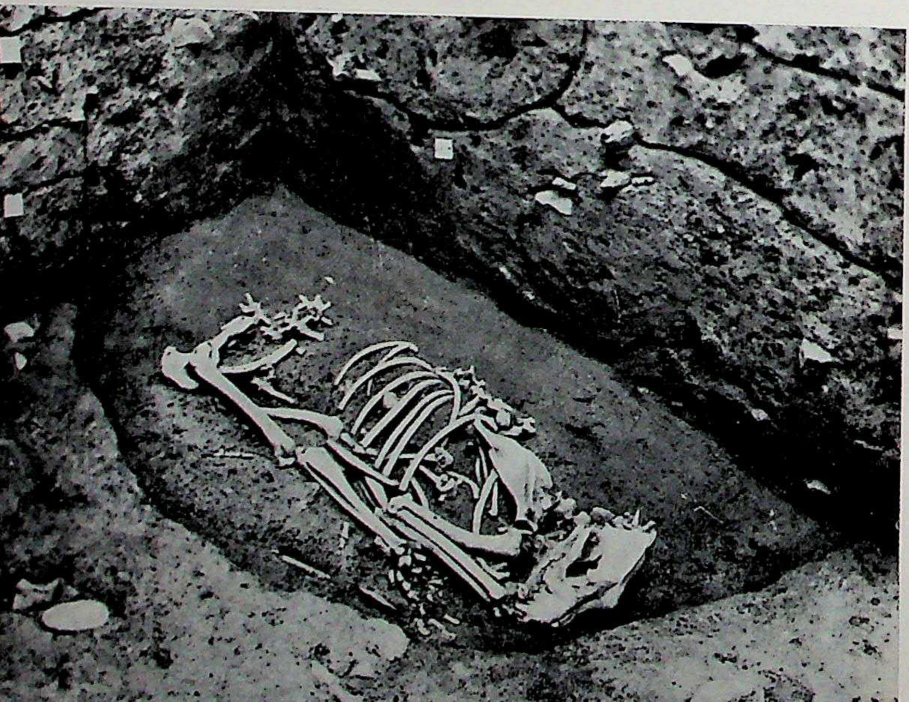
II



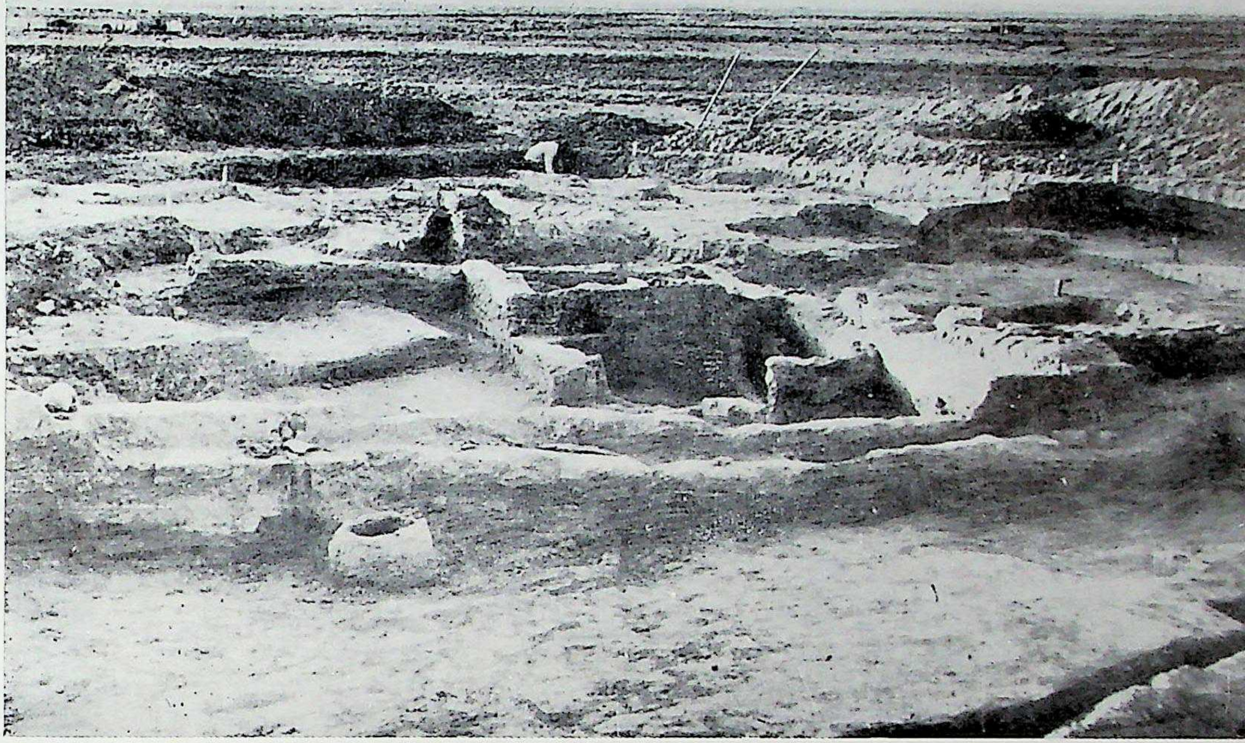
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

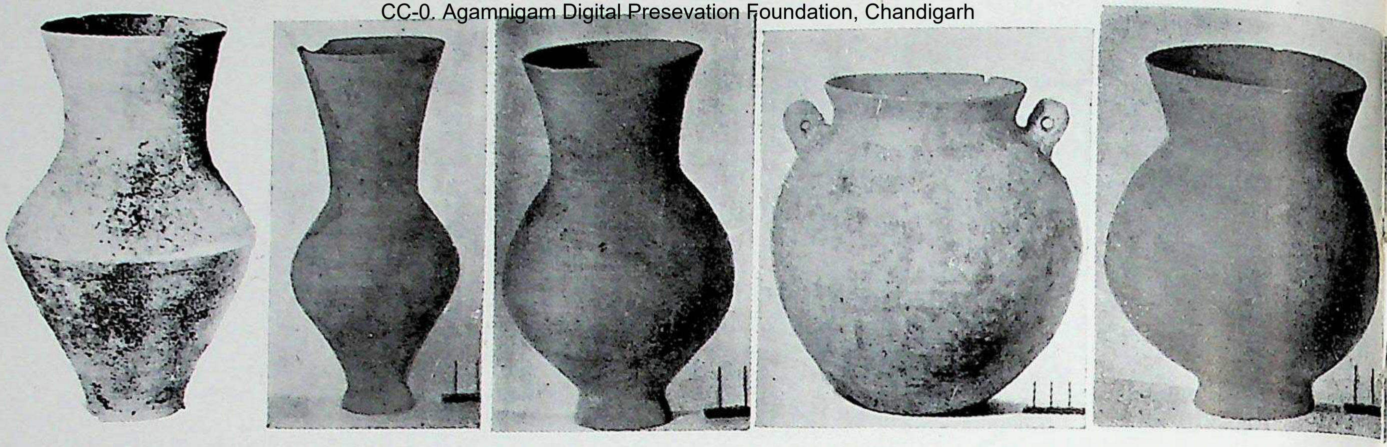


IV

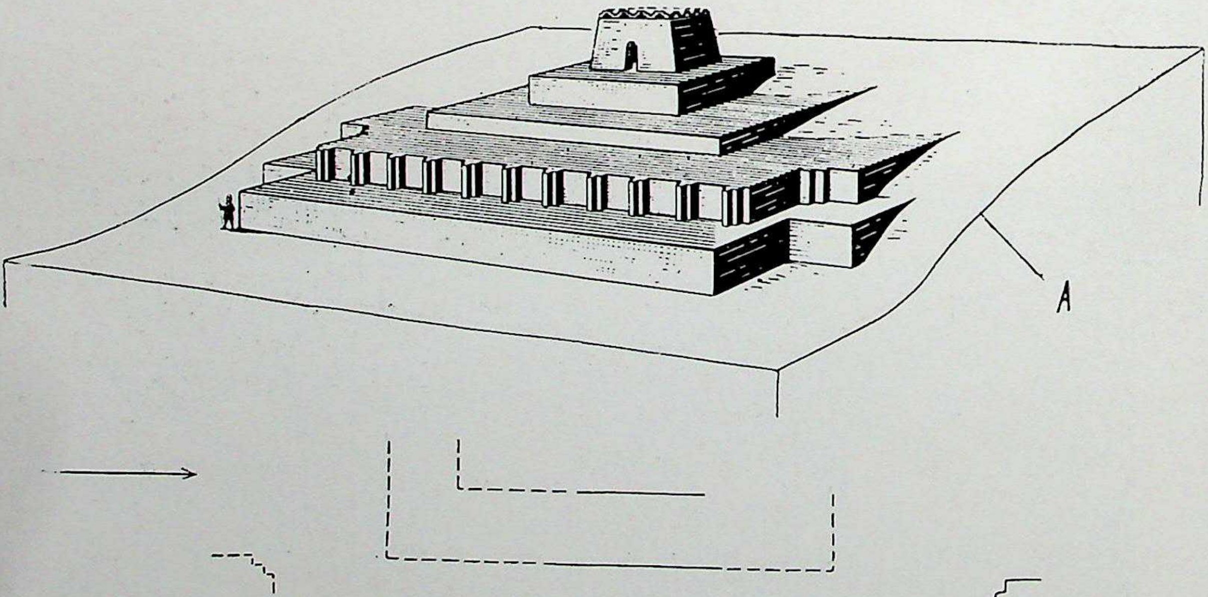


VII





**VIII** *a* *b* *c* *d* *e*

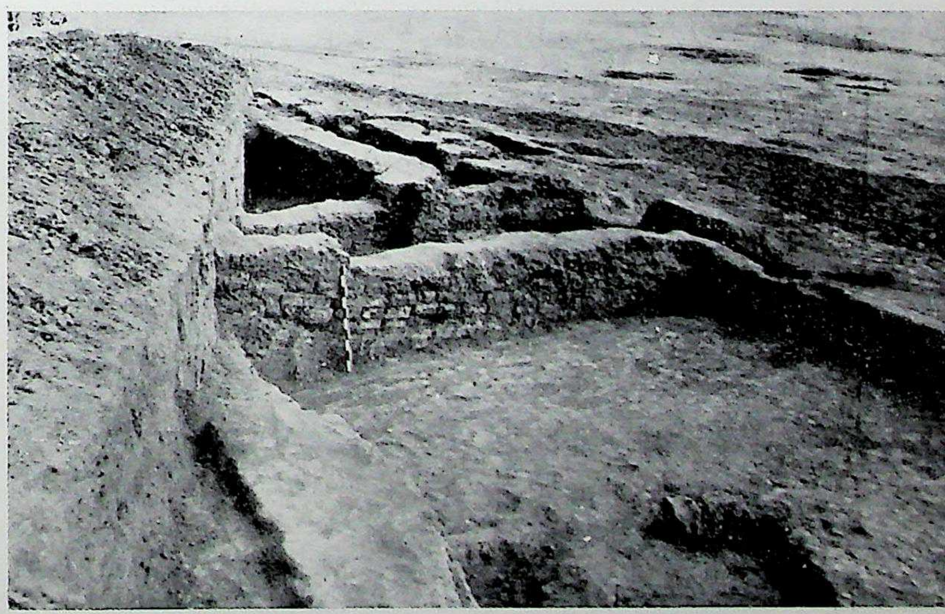


**IX**

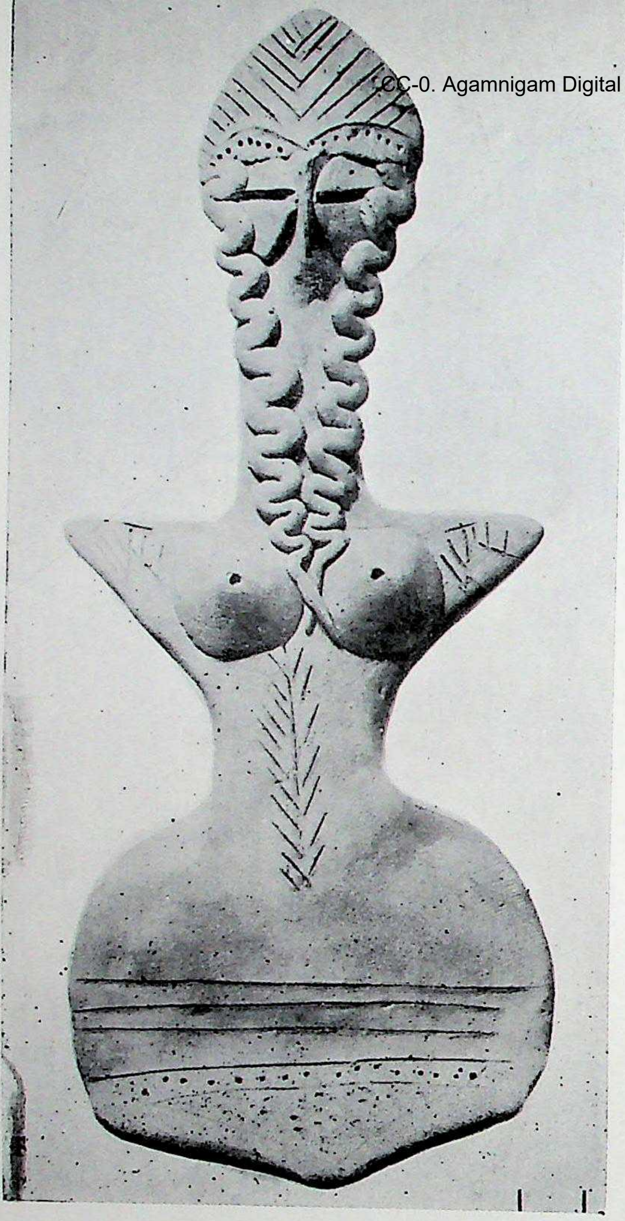
*f*

*g*

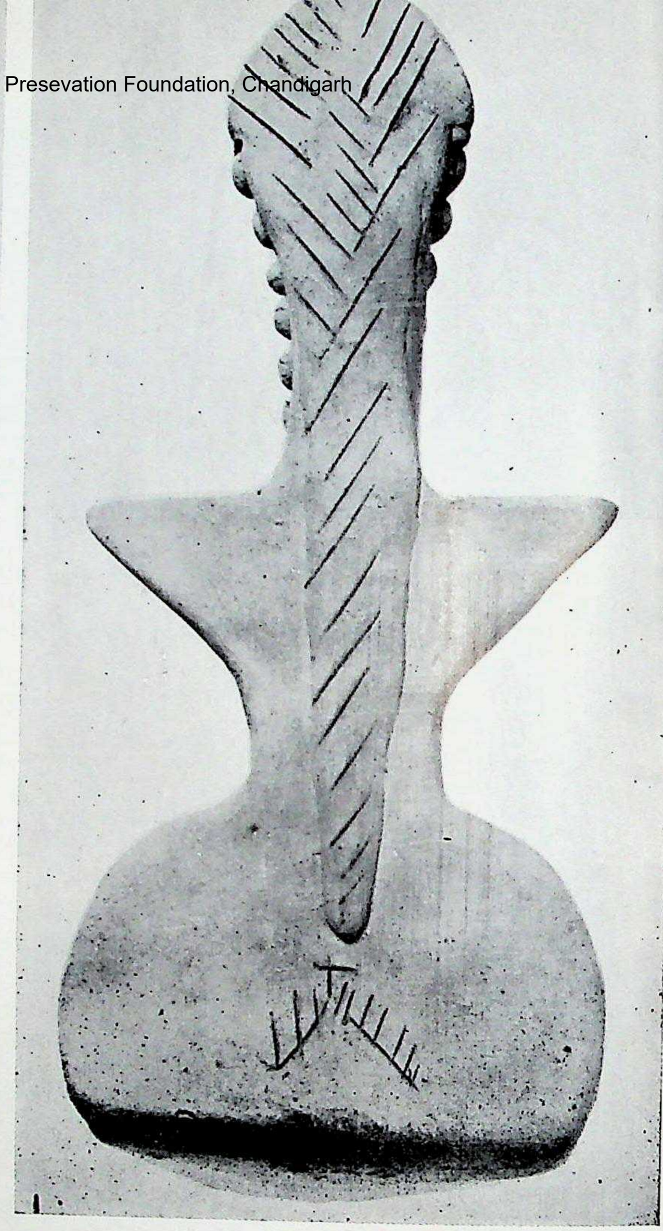
XI



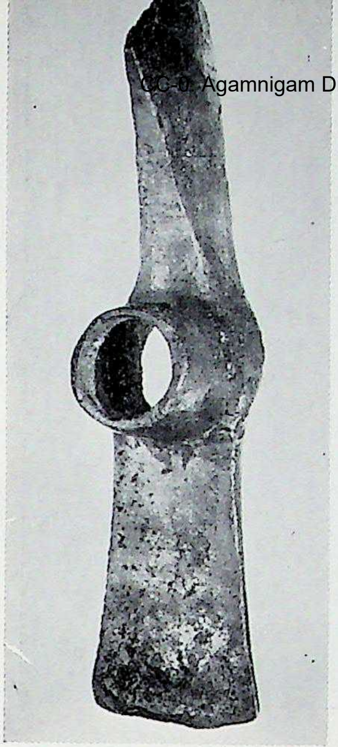
X



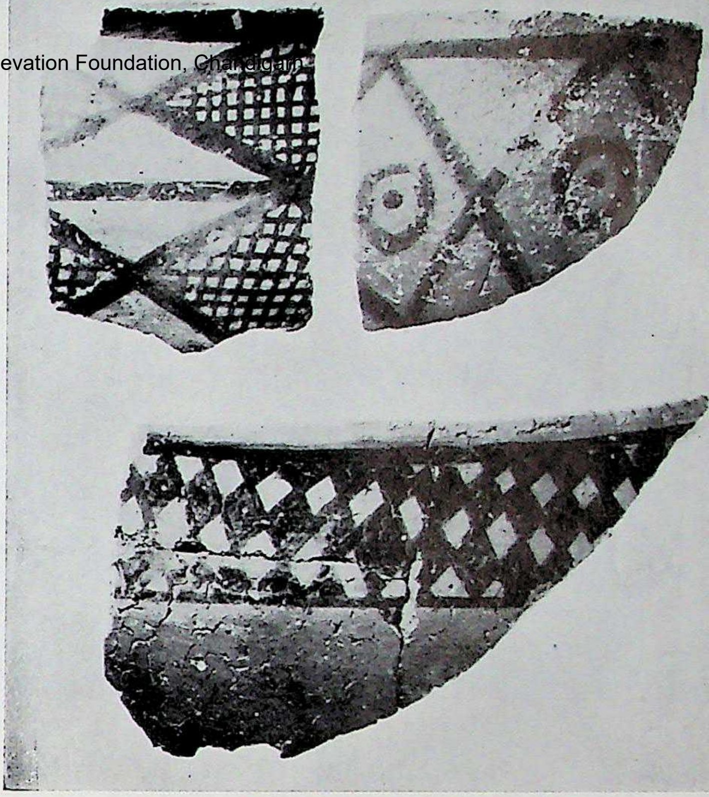
XIII



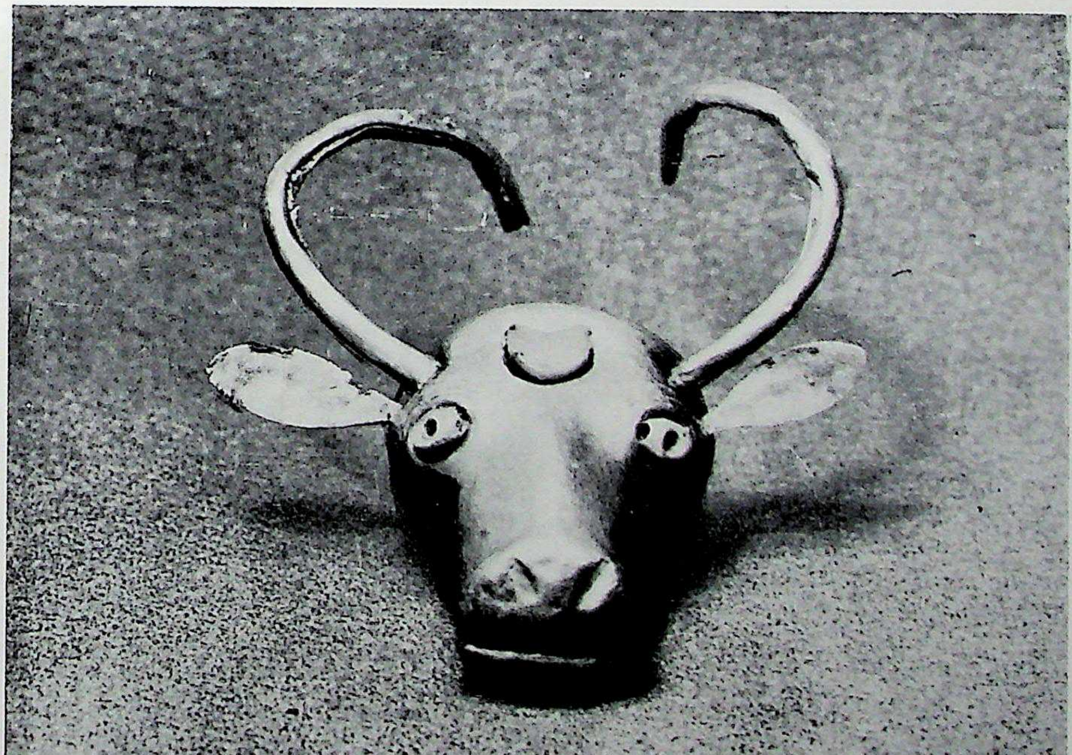
XIV



XII

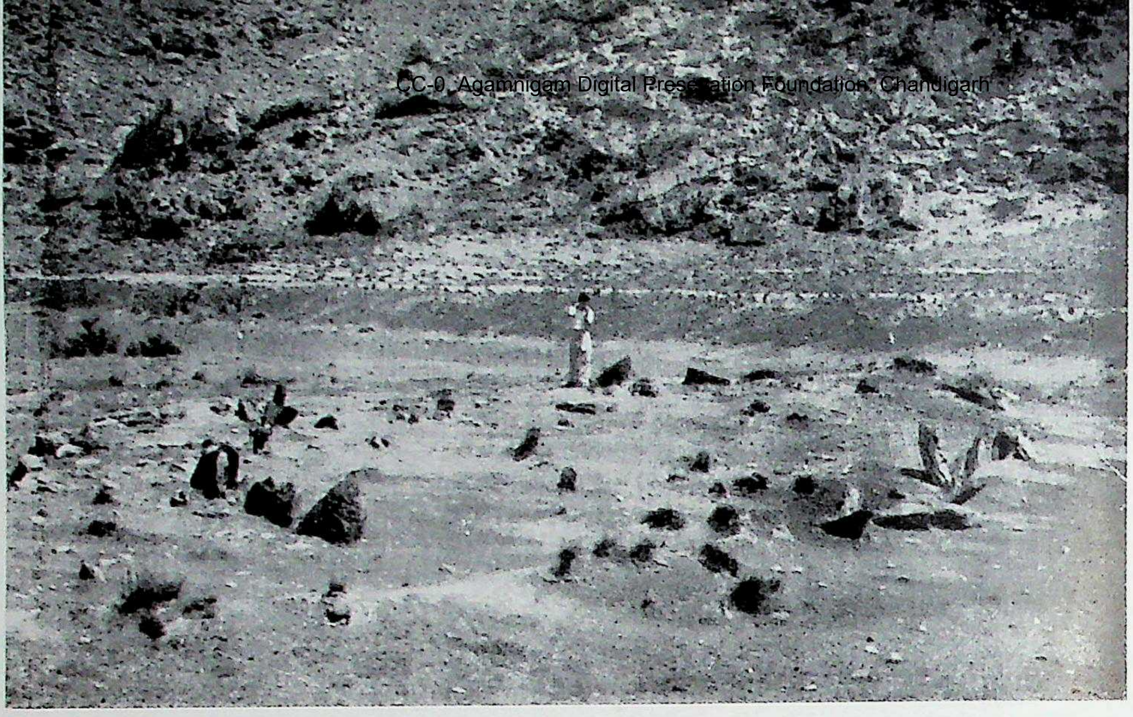


XV

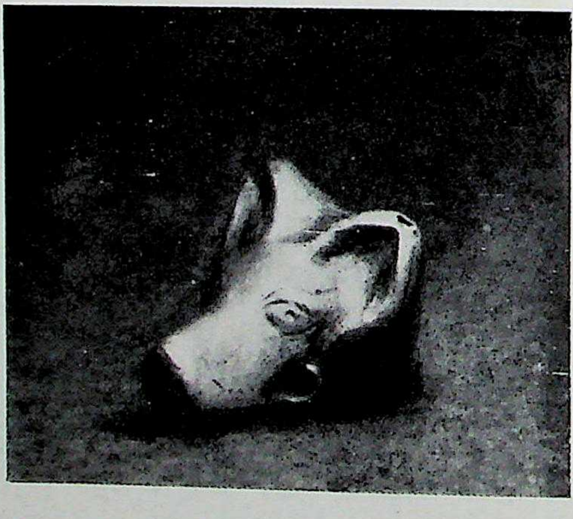


XVI

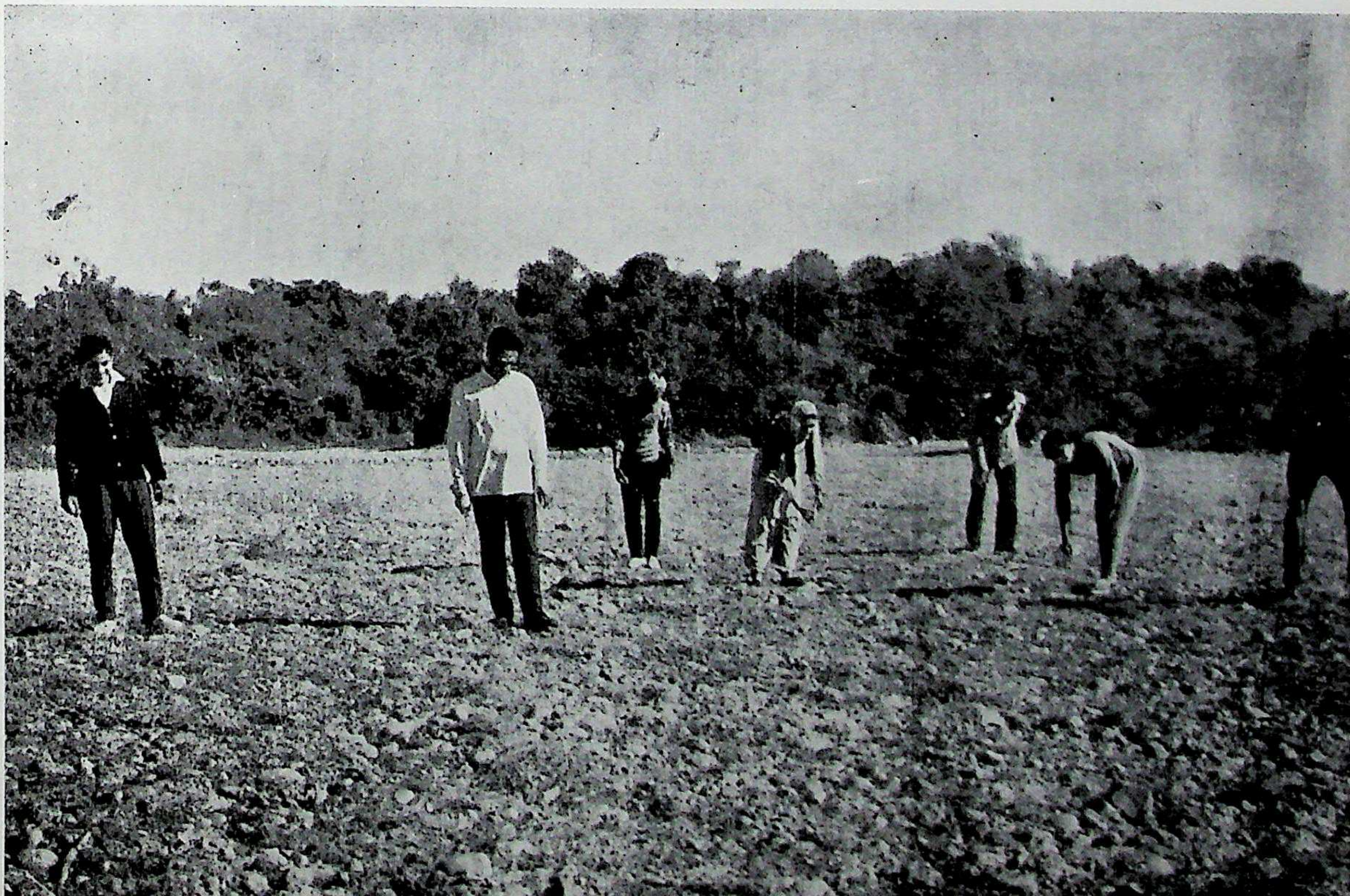
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh



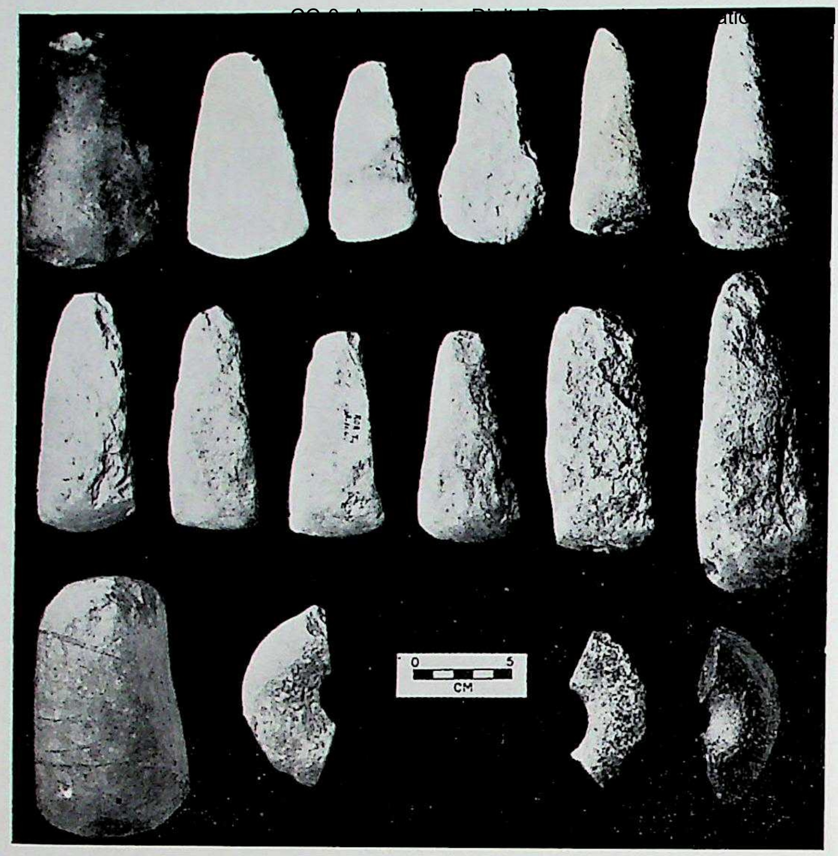
XVIII



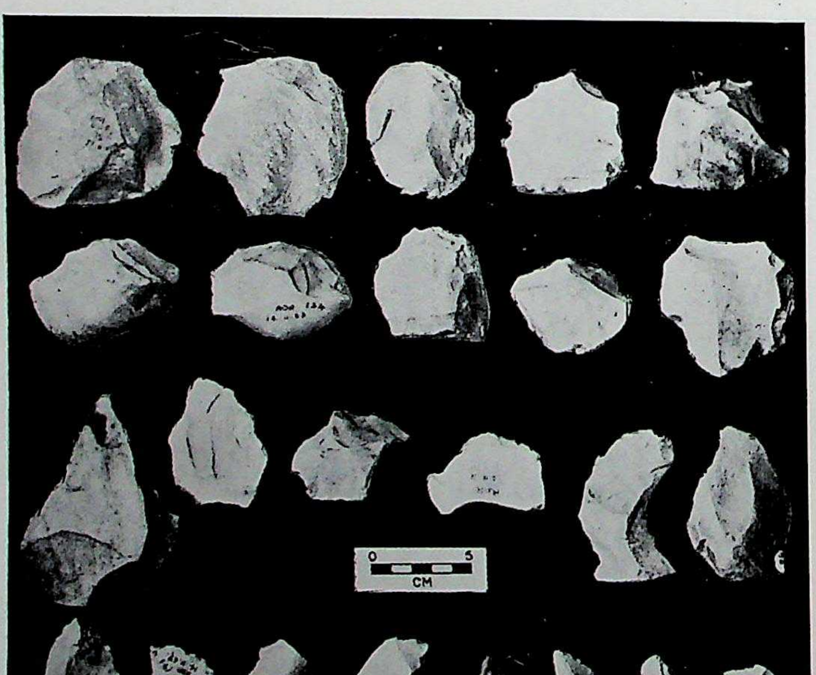
XVII



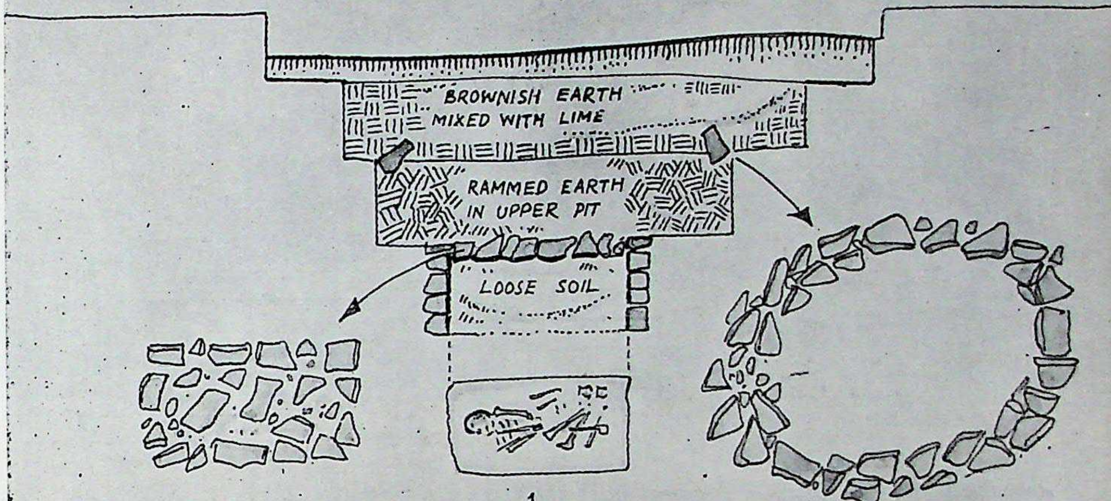
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh



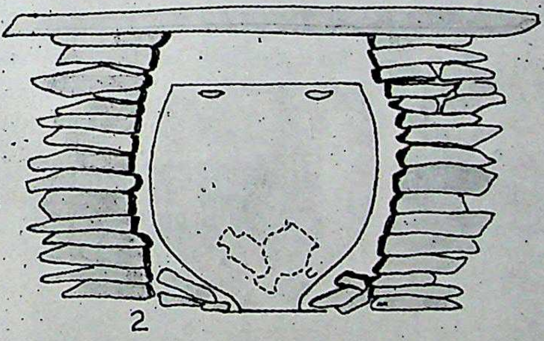
XX



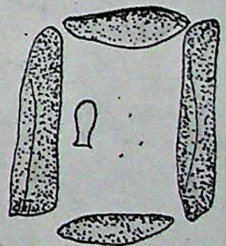
XXI


BROWNISH EARTH
MIXED WITH LIME
RAMMED EARTH
IN UPPER PIT
LOOSE SOIL

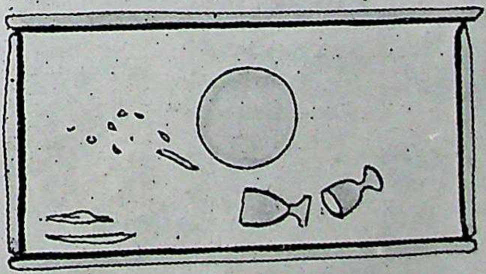
1



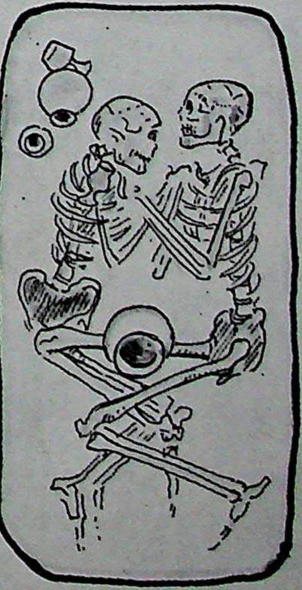
2



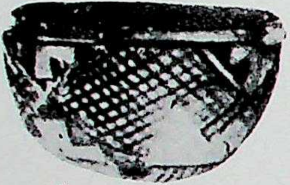
3

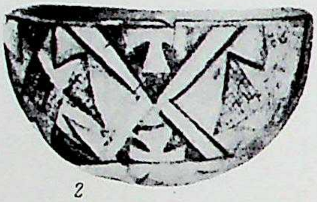


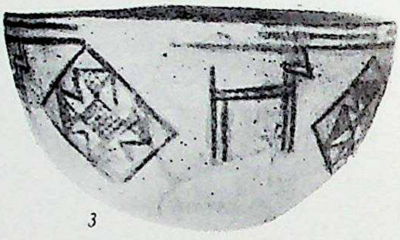
4



5

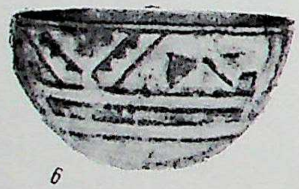

1

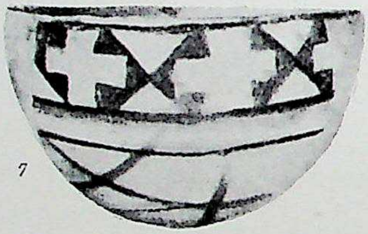

2


3

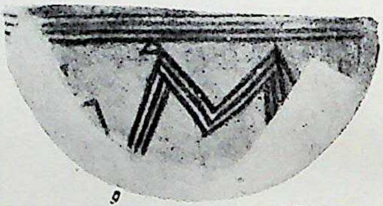
4

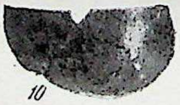
5

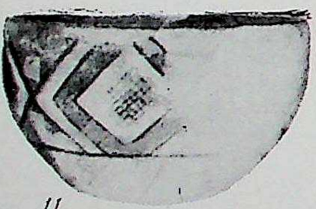

6

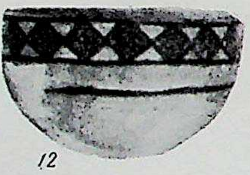

7

8

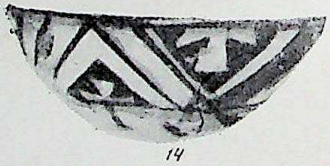

9

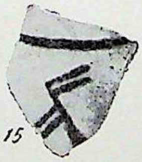

10

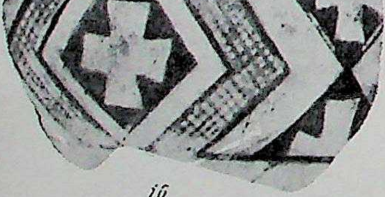

11

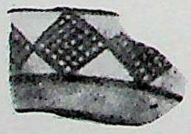

12

13

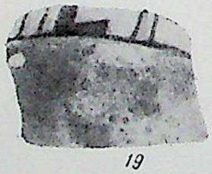

14

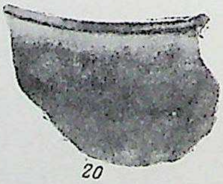

15

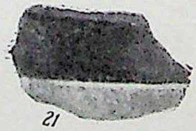

16

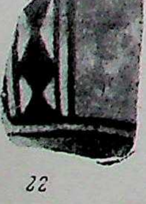

17

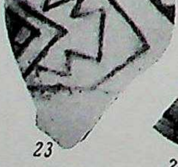
18


19


20


21


22


23

24

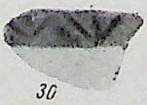
25

26

27

28

29


30

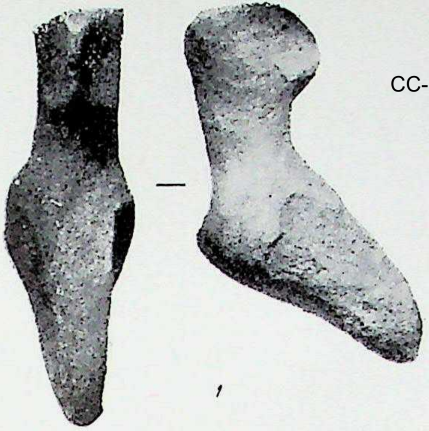
31

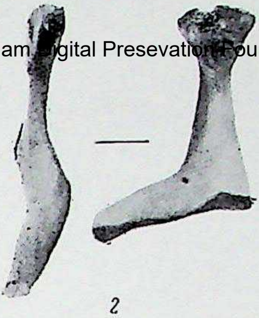
32

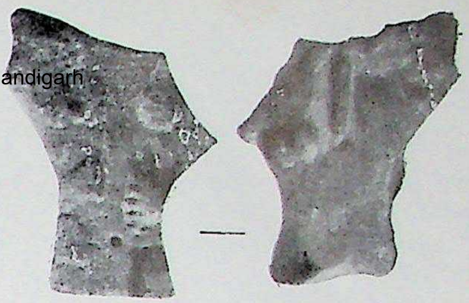
33

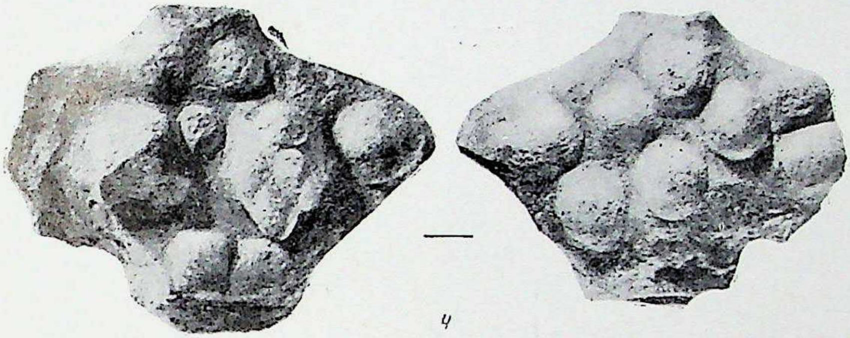
34

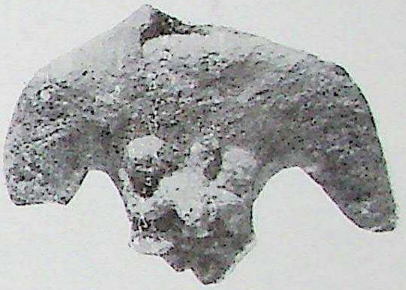
35

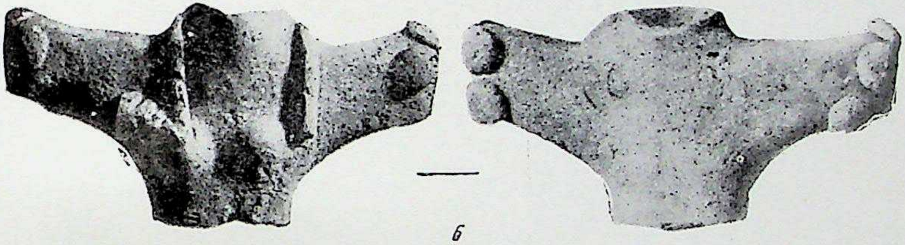

1

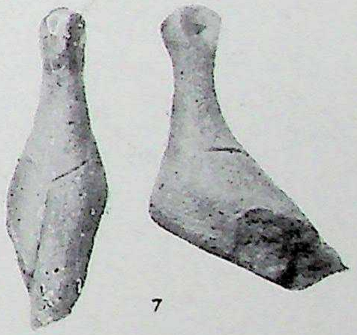

2

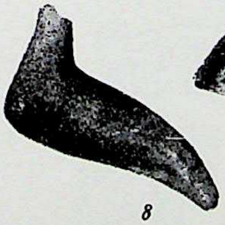

3

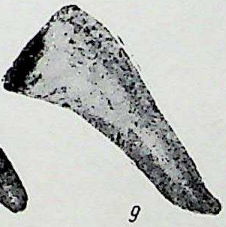

4

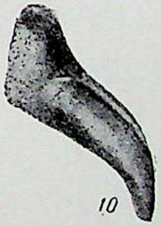

5


6


7


8


9

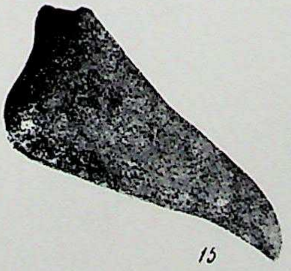

10

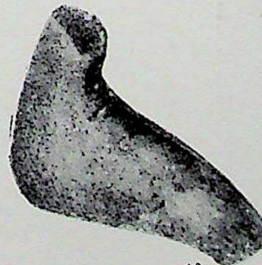
11

12

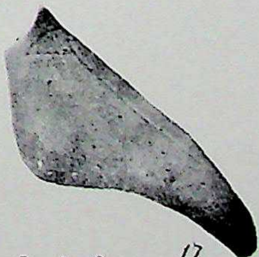
13

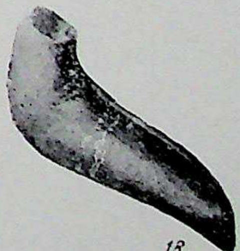
14


15

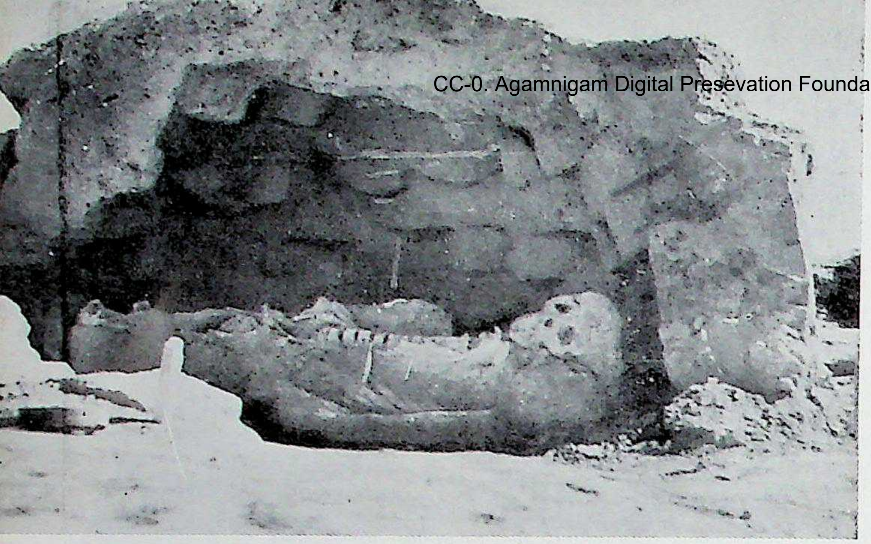

16

0 1 2 см

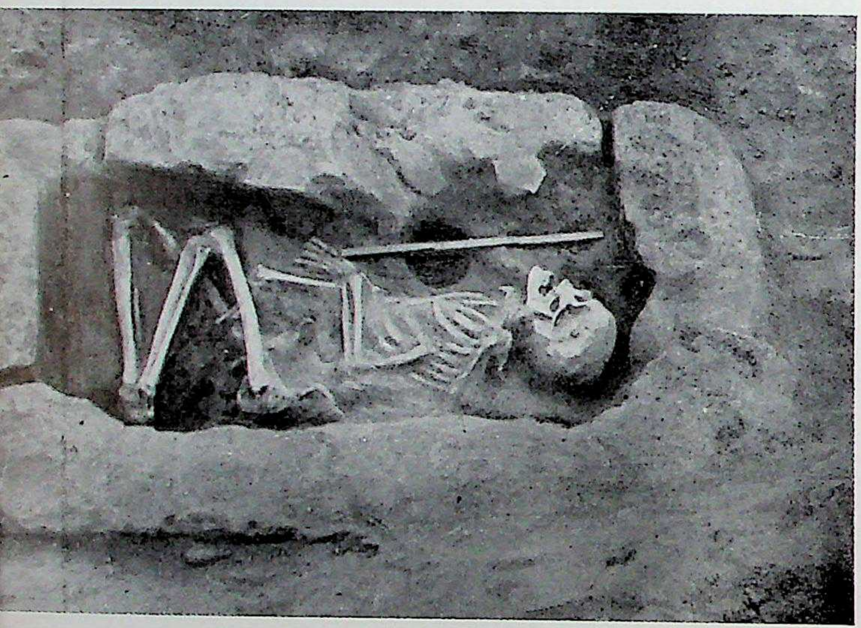

17


18

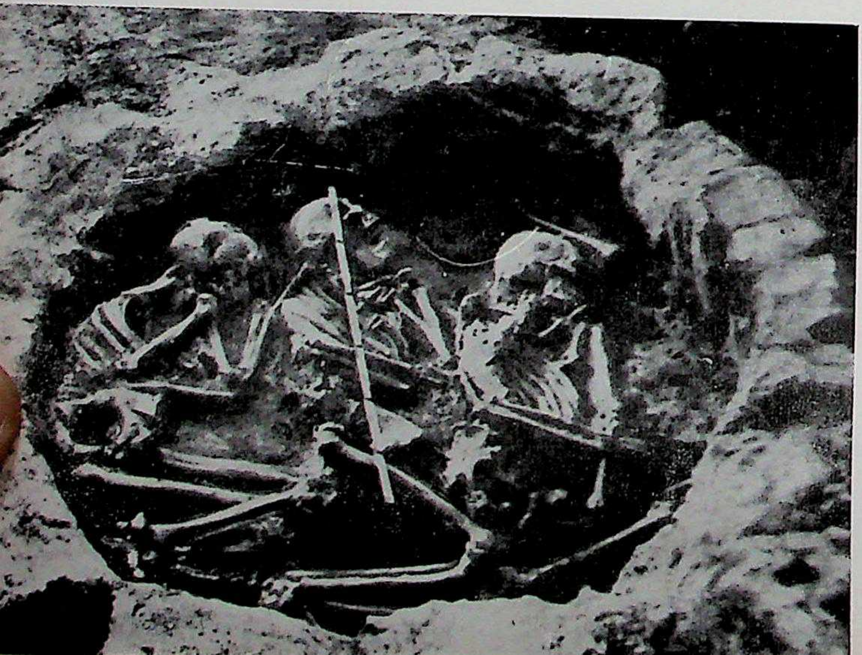
19



XXV

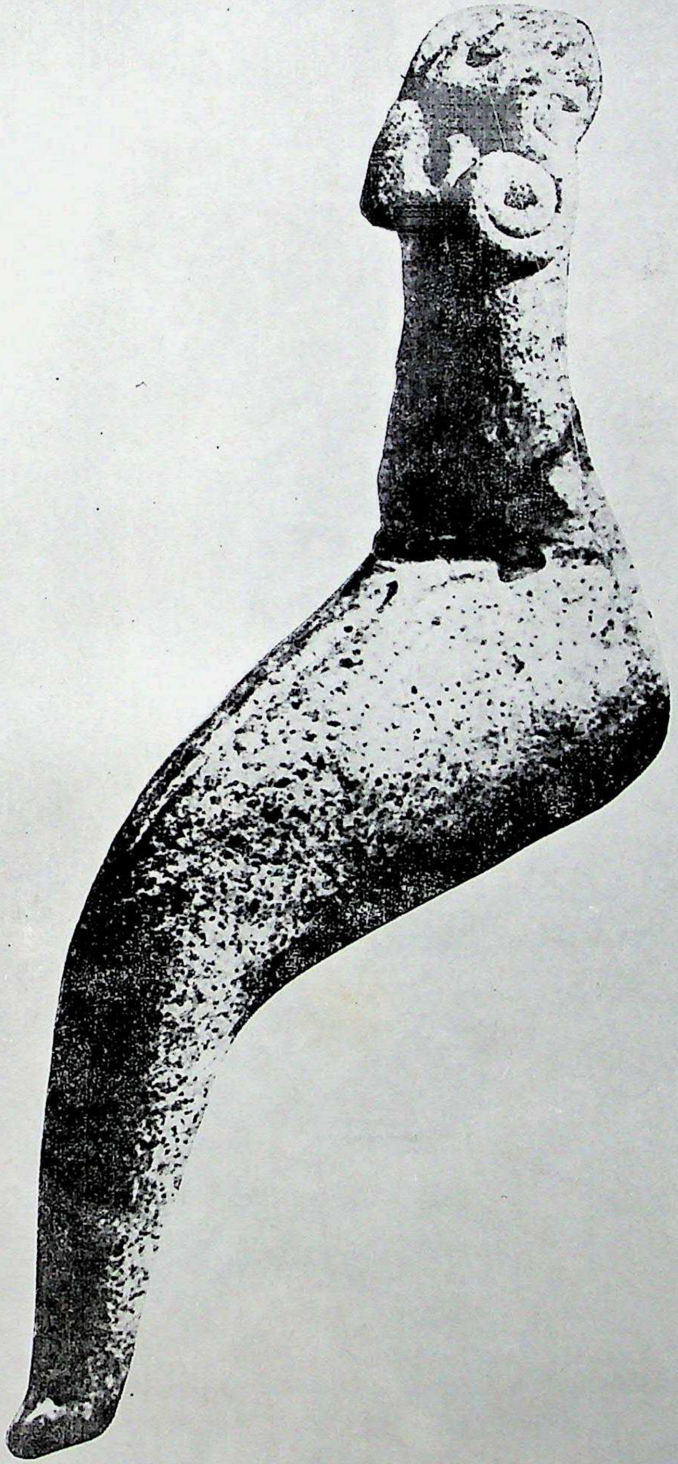


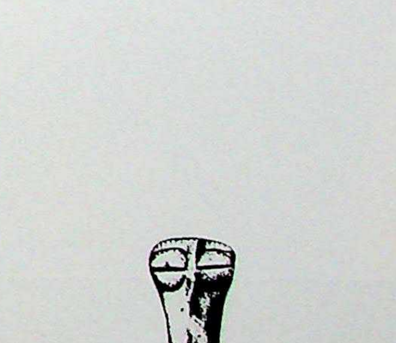
XXVI



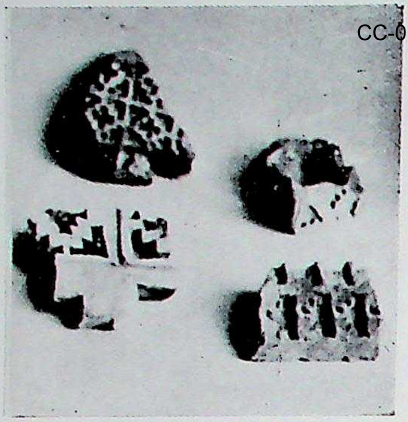
XXVII

XXVIII

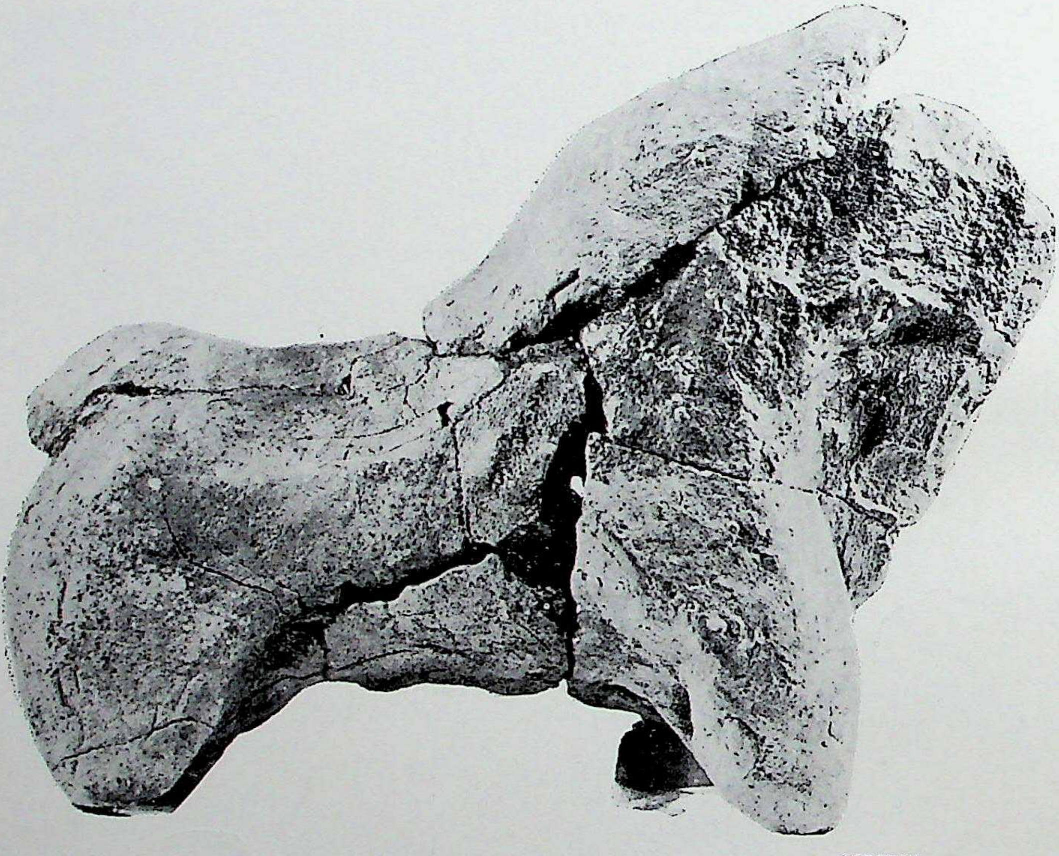




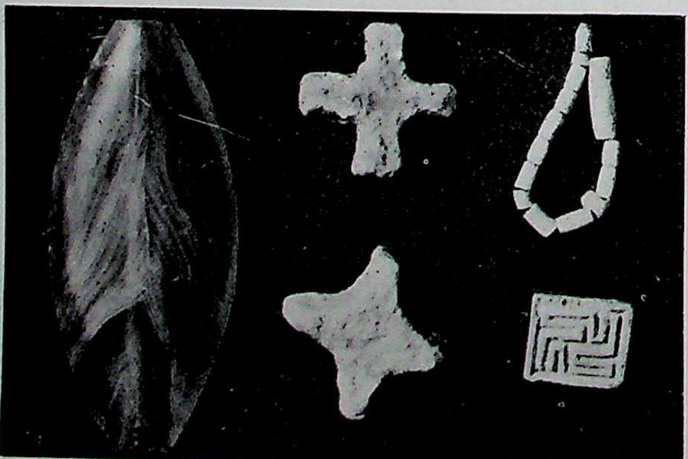
XXIX



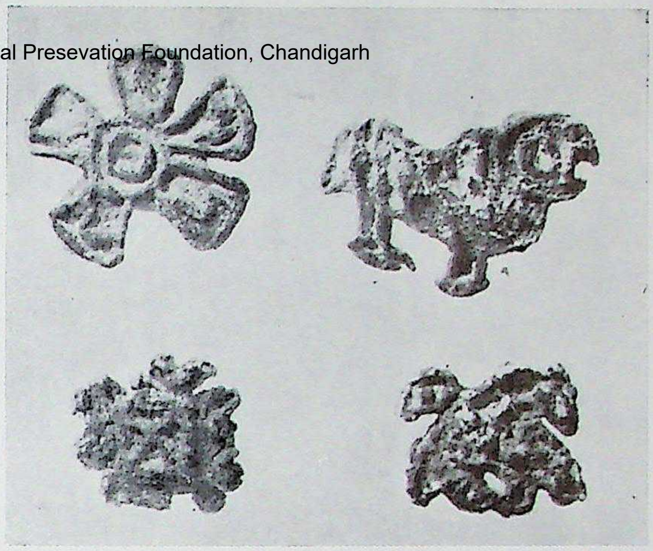
XXX



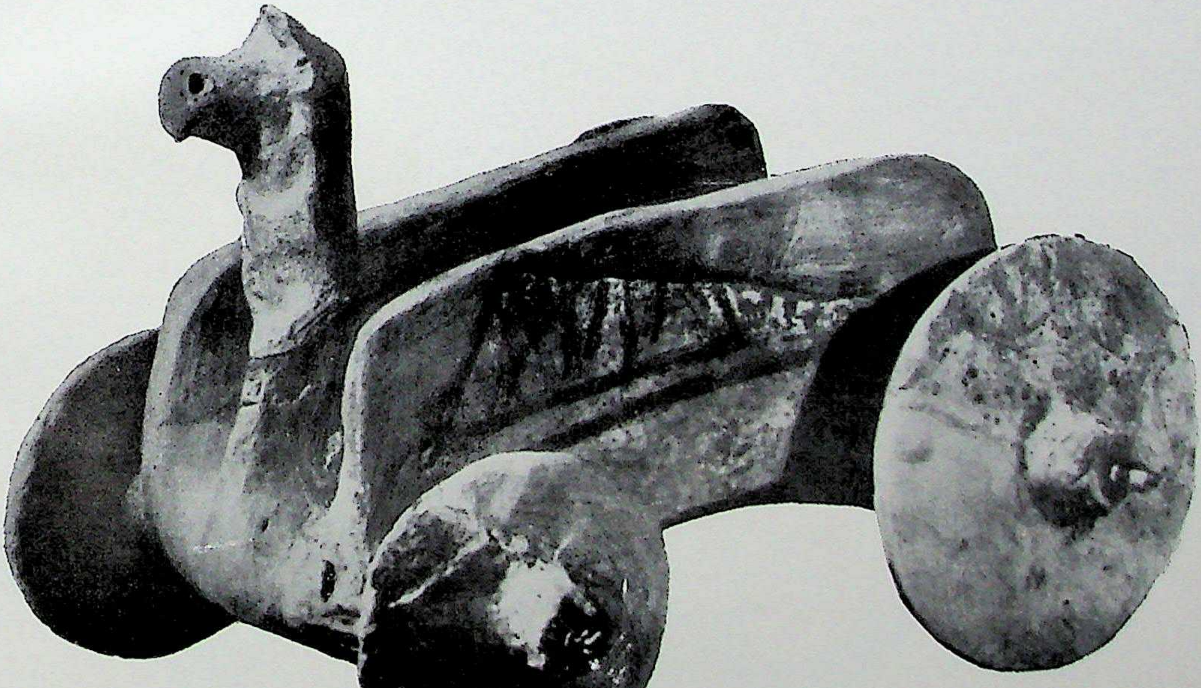
XXXI



XXXII

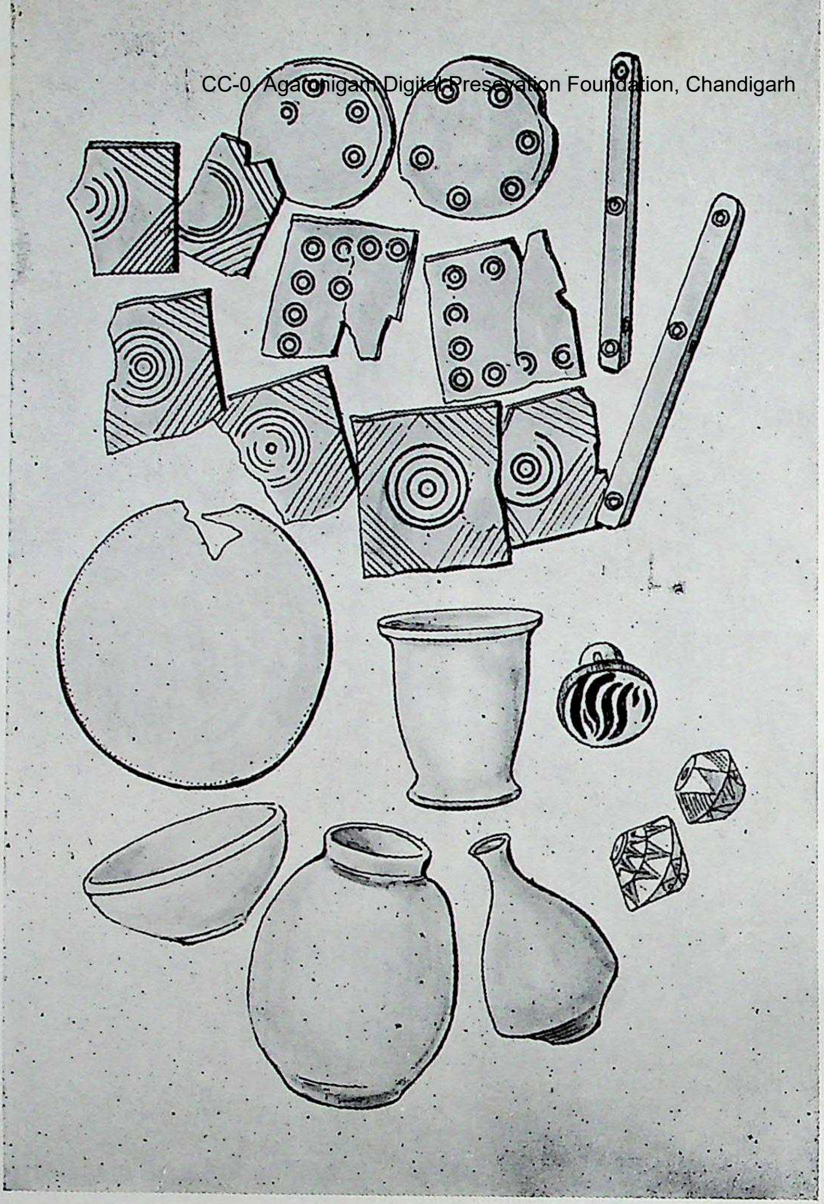


XXXIII



XXXIV

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

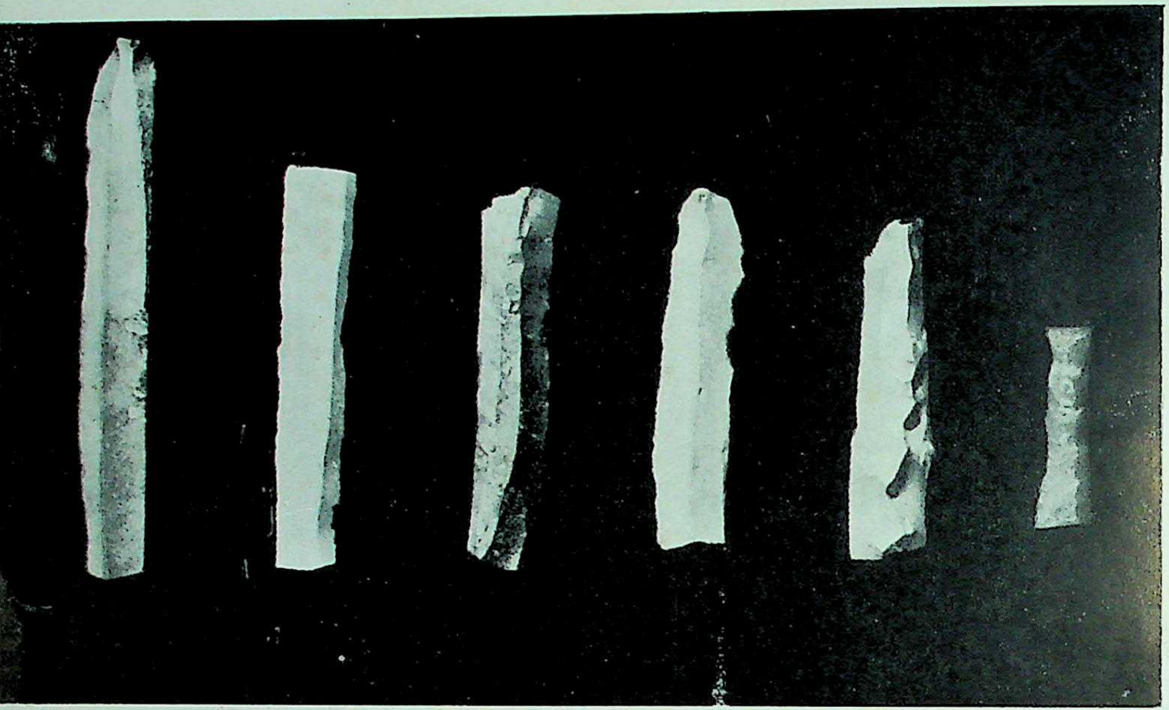


XXXV

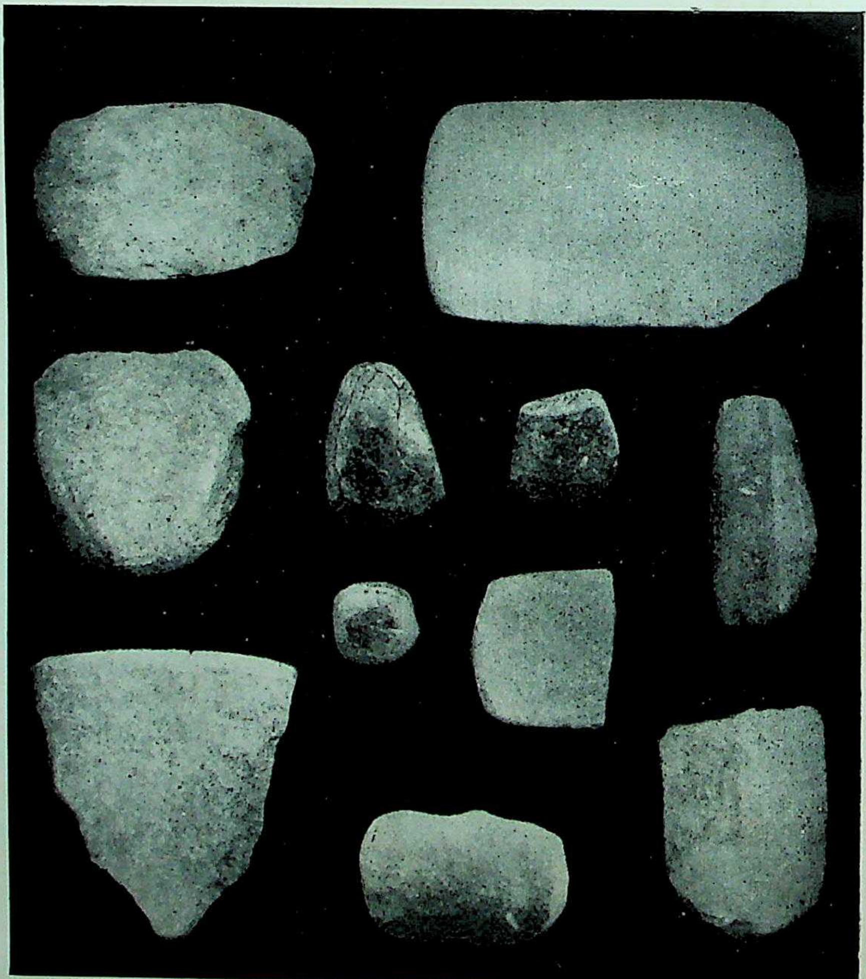
XXXVI

XXXVII

XXXVIII



XXXIX



XL

## About this Book (Vol. I & II)

*"Well compiled and written book by S. P. Gupta is the most extensive and detailed work in English. It is the result of the visit Dr. S. P. Gupta paid to the USSR and his laborious research of the Russian scientific literature. This work could not have been possible without long contacts between Indian scholars and Soviet archaeologists. This is a wonderful example of fruitful international cooperation..."*

—V. A. RANOV  
*Head of Archaeology Deptt.,*  
*Academy of Sciences, Tadjik USSR*

THE book deals with a region which is legendary in history since it has been a melting pot of various Asian cultures not only in the recent past but also in the prehistoric times. Unfortunately, much of the archaeological discoveries made during the last fifty years, which have thrown new light on that history, is not sufficiently known outside the USSR, mainly because of the language barrier.

THE BOOK HAS BEEN PLANNED IN THREE VOLUMES : THE FIRST DEALS WITH THE PRE-HISTORIC CULTURES OF THE STONE AGE, THE SECOND DEALS WITH PROTOHISTORIC CULTURES OF THE BRONZE AGE AND THE EARLY IRON AGE, WHILE THE THIRD DEALS WITH THE CULTURES OF HISTORICAL PERIOD.

THE book, however, does not concern itself exclusively with the cultures of Central Asia, it takes into account the Indian Boderlands also-north-western India, Pakistan, Afghanistan Iran and western China—of course, to the extent they entered into culture-interaction with Soviet Central Asia. It is, therefore, a unique work. Nearly 350 figures, maps, charts and plates Illustrate Vol. I and Vol. II

**B. R. Publishing Corporation**  
DELHI-110052